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ABSTRACT

This publication is designed as a guide for libraries that have elected to undertake a formal study of preservation needs in preparation for planning and implementing programs to meet those needs. The manual is divided into four sections. The first section (Chapters 1-2) provides an overview and orients the reader to the planning process. The next section (Chapters 3-4) covers the start-up of the preservation planning process and the tasks to be accomplished during Phase I of the study. The third section (Chapters 5-10) discusses the more detailed investigations to be carried out during Phase II of the study and describes in-depth investigation of needs in the areas of environmental control, physical condition of the collections, organization of operation preservation units, disaster preparedness, staff and user education, and fundraising for preservation. In libraries where a more limited approach is preferred, the program can be adapted by selecting from among these areas. The last section (Chapter 11) focuses on Phase III of the study, the preparation of the preservation plan. The manual also brings together a variety of checklists, outlines, and samples that help to guide investigations and analysis. Association for Research Libraries members who have used the publication in carrying out their own preservation planning are listed in the front of the publication. (Contains 25 references.) (KRN)

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Preservation Planning Program

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Preservation Planning Program
An Assisted Self-Study Manual for Libraries

Revised 1993 Edition

Developed by Pamela W. Darling with
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PREFACE TO THE 1982 EDITION

In 1979, the National Endowment for the Humanities awarded a grant of $151,924 to the Association of Research Libraries' Office of Management Studies (ARL/OMS), for the design and testing of "a self-study procedure to enable academic libraries to identify and address preservation problems." OMS staff members Duane E. Webster, Jeffrey Gardner and Maxine Sitts laid the foundation for the project, and conducted a survey of preservation activities in ARL member libraries in the spring of 1980. This survey resulted in the development of three SPEC Kits that provided background for subsequent work [*Planning for Preservation*, #66; *Disaster Prevention and Preparedness*, #69; and *Basic Preservation Procedures*, #70; published by ARL between 1980 and 1981].

In July 1980, Pamela W Darling was employed as Preservation Specialist to develop and test the planning process. Three libraries, those of Dartmouth College and the Universities of Virginia and Washington, used the draft manual in pilot tests conducted in 1981, and the present volume owes much to the thorough and thoughtful evaluations and suggestions provided by the staff in each of these institutions.

Project staff were beneficiaries of a wealth of experience, information and counsel from an advisory committee of research librarians and preservation specialists. The patience, creative suggestions and unfailing support of Dr. Margaret E. Child, Assistant Director for Research Resources at the National Endowment for the Humanities, were invaluable in bringing the work to completion.

Pamela W. Darling
March 31, 1982

PREFACE TO THE REVISED 1993 EDITION

The ***Preservation Planning Program*** (***PPP***) has been assisting the preservation efforts of research libraries for over ten years. From the time the initial National Endowment for the Humanities grant was awarded in 1979 to support the design of a preservation self-study procedure, until 1988, eighteen libraries participated in the Program. In 1988 NEH awarded ARL a follow-up grant that articulated three goals: extending the Program to ten additional ARL libraries, increasing the available pool of trained preservation consultants, and undertaking a formal review of the ***PPP***. In her in-depth evaluation, Dr. Margaret Child recommended that the printed resource materials that help to guide ***PPP*** studies be revised in light of extensive experience with the planning process, and changes in the field of library preservation.

The 1982 edition of the ***Preservation Planning Program: An Assisted Self-Study Manual for Libraries*** was written by Pamela Darling and Duane Webster. Later it was reissued as the ***Expanded 1987 Edition***, differing from the 1982 edition by inclusion of two new chapters, one by Carolyn Harris and one by Jan Merrill-Oldham. In June 1991, the National Endowment for the Humanities Division of Preservation and Access awarded ARL a new grant to support revision and enhancement of the ***PPP***'s printed resource materials. As a result, the manual has been thoroughly revised and updated by Jan Merrill-Oldham, Head, Preservation Department, University of Connecticut; and Jutta Reed-Scott, ARL Senior Program Officer for Preservation and Collections Services. Richard Frieder, Preservation Librarian, Northwestern University; Barclay Ogden, Head, Conservation Department, University of California at Berkeley; Lorraine Olley, Head, Preservation Department, Indiana University; and Nancy Carlson Schrock, Preservation Consultant, contributed to the ***Revised 1993 Edition***. For the chapter on the physical condition of the collections, Barclay Ogden prepared the section on the needs assessment surveys, and Nancy Carlson Schrock both prepared the sections describing the Harvard University Preservation Office survey methodology, and provided expert advice on all aspects of collections surveying.

This edition of the ***PPP Manual*** provides a well tested methodology for comprehensive preservation planning. It aims to assist libraries in their efforts to establish or augment local preservation programs.

Jan Merrill-Oldham
Jutta Reed-Scott
March 31, 1993

PAST PARTICIPANTS IN THE PRESERVATION PLANNING PROGRAM

A significant number of ARL libraries have used the *Preservation Planning Program*. Their final reports, which are available separately as ARL publications, are rich in information about all aspects of preservation planning. Past participants include:

University of Arizona Library
Boston Public Library
Center for Research Libraries
University of Colorado Library
Colorado State University Library
Dartmouth College Libraries
University of Delaware Library
Duke University Libraries
University of Florida Libraries
University of Georgia Libraries
Iowa Sate University Library
University of Kentucky Libraries
University of Missouri Library
National Agricultural Library
National Library of Medicine
Northwestern University Libraries
Ohio State University Libraries
Oklahoma State University Library
University of Oregon Library
University of Pittsburgh Libraries
Purdue University Library
Smithsonian Institution Libraries
University of Southern California Library
SUNY at Stony Brook Library
Syracuse University Library
University of Tennessee Libraries
University of Virginia Library
University of Washington Libraries
University of Wisconsin Libraries

HOW TO USE THIS MANUAL

The *Preservation Planning Program Manual* is designed primarily as a guide for libraries that have elected to undertake a formal study of preservation needs, in preparation for planning and implementing programs to meet those needs. The Manual is divided into four sections. The first part (***Chapters 1-2***) provides an overview and orients the reader to the planning process. The second part (***Chapters 3-4***) covers the start-up of the preservation planning process and the tasks to be accomplished during Phase I of the study. The third part (***Chapters 5-10***) discusses the more detailed investigations to be carried out during Phase II of the study. Note that in libraries where a more limited approach is preferred, the program can be adapted by selecting from among the areas suggested for in-depth investigation in Phase II, those that are of greatest concern to the institution. The fourth part (***Chapter 11***) centers on Phase III of the study, the preparation of the preservation plan. Additionally, the manual brings together a variety of checklists, outlines, and samples that help to guide investigation and analysis.

THE RESOURCE GUIDES

Preservation is a complex and rapidly evolving field supported by a growing body of technical information. This manual is complemented by a series of *Preservation Planning Program Resource Guides*, also developed with support from the National Endowment for the Humanities. Each guide offers a conceptual framework to facilitate preservation decision-making within a specific program area. Guides are available on the following topics:

Collection Maintenance and Improvement
Collections Conservation
Disaster Preparedness
Managing a Library Binding Program
Options for Replacing and Reformatting Deteriorated Materials
Organizing Preservation Activities
Staff Training and User Awareness in Preservation Management

Taken together, the guides serve as points of departure for a library's assessment of current practices. From the broad and diverse range of preservation literature, materials have been selected for inclusion because they relate important principles, standard procedures, or effective approaches that have emerged through experience. The intent is to provide normative information against which a library can measure its preservation efforts. The resource guides build on and draw from the preservation-related information that has been published over the last decade, forming a core reference collection that will support both preservation planning activities and on-going preservation programs.

CHAPTER ONE
INTRODUCTION TO THE PRESERVATION PLANNING PROGRAM

Rationale and Background

Preservation has been variously described as a problem, as a challenge, as a crisis, and as an idea whose time has come. The language is glamorous, but the hard work of mobilizing an institution-wide preservation effort is not. We must do so, however, if access to the large collections of library and archives materials that have been amassed over time is to be maintained. The scope of the preservation challenge differs among institutions, but study after study confirms that a significant percentage of the retrospective holdings in North American libraries have deteriorated to the point where they can be damaged or ruined by a single use.

The rapid deterioration of most books printed after 1840 is only the most visible byproduct of the many factors that combine to threaten the survival of recorded information. Poor storage conditions, damaging processing procedures, and wear and tear from use, all compound the rate of decay that arises naturally from the inherent instability of virtually all information media, from paper and leather to plastics and glass.

For the research library--traditional preserver of society's collective knowledge, wisdom, and experience--the implications are serious indeed. To what purpose the acquisition, cataloging, and housing of vast collections, if the materials themselves will deteriorate in half a lifetime? Informed estimates and a series of large-scale condition surveys suggest that the paper in twenty-five percent or more of the volumes in major research collections has become extremely brittle.

The rate at which new materials are joining the endangered is disconcerting. A Council on Library Resources-funded study conducted by William J. Barrow in 1957 showed that 97% of sample book papers manufactured in the first forty years of this century had a useful life of no more than fifty years, with half of those likely to last less than twenty-five years if used at all. The arithmetic is complicated but the implications are clear.

While the 1980s saw increasing use of alkaline paper for book production in wealthier parts of the world, in some countries almost all available, affordable paper is highly acidic. Compounding the problem is the fact many of the newer information media are even more unstable than acidic paper. Such materials as magnetic tape, optical disks, and color photographs all have surprisingly short shelf lives, further complicating the ability of research libraries to ensure the long-term availability of their holdings.

In the past decade, growing awareness of the magnitude of the preservation problem has resulted in a steady increase in the development of preservation programs within research, academic, and public libraries. Formal preservation planning efforts have played a critical role in improving existing practices, and in stimulating the expansion of capabilities.

A formal preservation program that bears relationship to the size, nature, and condition of a library's collections, and to prevailing patterns of use, is the institution's best insurance against wholesale deterioration of those collections. Collaborative planning for such a program can provide a rational process within which to analyze needs, educate a broad spectrum of staff, and cultivate an environment in which preservation activities can develop and flourish.

The rationale for undertaking an orderly, thorough preservation planning process is based on the assumption that participants will come to recognize the seriousness of the situation, will gain new knowledge and skills, and will take back to their daily work and to their colleagues both heightened awareness and dedication to implementing a plan of action. The process establishes an investigative environment in which to grapple with preservation issues and design locally appropriate responses.

The Preservation Planning Program

The ***Preservation Planning Program*** (***PPP***) is a blueprint created to assist self-study, through which the preservation needs of an institution can be identified, and responses formulated. Over the past decade, 29 ARL libraries have completed the ***PPP***, and many more have used its resources. The program is based on three assumptions:

1. The work of preservation must be done by the library and requires a commitment to identify and address needs systematically.
2. Library staff can play a key role in charting a course of action.
3. The field of preservation has attained a certain level of maturity, so that model programs and a body of literature exist and can be studied.

The ***PPP*** has three features that relate to these assumptions:

1. The ***Preservation Planning Program Manual***, with its companion ***Resource Guides***, presents a methodology for collecting information regarding the character and dimensions of a library's preservation problems as a first step toward establishing programs to correct them.
2. Participation in the study process promotes staff learning and professional development, creating a broad understanding within the library of the nature and importance of preservation, and enhancing the ability of the library to respond to needs on a continuing basis.
3. Libraries that elect to participate in the formal program through ARL receive extensive training and assistance, which promotes the timely, efficient accomplishment of what can be a complex and demanding activity; and enhances access to up-to-date technical and procedural developments.

Objectives

Specific objectives of the planning study lead toward the ultimate goal of enhancing the library's ability to preserve its collections. These are:

1. to raise the institution's awareness of its preservation problems and reach consensus on how to address them;

2. to use existing information and available models as a springboard for planning and implementing a program that responds to the institution's local circumstances;

3. to increase the library's ability to deal more effectively with complex preservation challenges;

4. to develop a long-term plan for resource development; and

5. to increase knowledge among library staff of current issues, developments, and the technical resources that are available for building the library's capabilities.

These objectives are process-oriented. The *PPP* does not by itself solve problems or create a preservation program. Rather, it stimulates recognition of preservation needs and the formulation of strategies for meeting them--a process that should continue long after the study is completed.

Techniques

The ***Preservation Planning Program*** employs research techniques that draw upon the strengths of the library and help staff avoid common pitfalls in studying preservation issues. The group study process offers the following advantages:

1. The potential to collect information is maximized. By encouraging contributions from many people, a broad knowledge base is tapped.

2. Direct involvement in planning encourages a sense ownership of ideas, problems, and solutions; and motivates individuals to strive to produce concrete, acceptable results.

3. Group discussion gives rise to a variety of perspectives, and stimulates the articulation of different approaches to reaching goals.

4. Direct involvement in the analysis improves the flow of information, provides an appreciation of different points of view, and reduces the need to explain issues second- or third-hand. Decisions are comprehended clearly.

The *PPP* provides a structure for extensive information gathering. Historical files, current facts and figures, and projections for the future, are all important to the inquiry. Sources of information include internal documents, documents from other institutions, the professional literature, and knowledgeable individuals within and outside the institution. Information is gathered through reading, observation, surveying, and interviews with individuals and groups.

The Program's systematic approach to analysis includes a series of interrelated steps through which data is collected, organized, and interpreted to develop specific recommendations:

> ***Data gathering***
> The group collects background information about the condition of the collections, and the nature and level of the preservation activities currently underway in the institution.

Analysis
The group assesses the data and evaluates the library's current level of preservation program development in comparison with current and anticipated preservation needs. In this process organizational strengths and weaknesses are identified, along with major areas in which development is most feasible and/or worthwhile.

Idea generation
The group outlines and develops plans to address the needs that have been identified, recommending actions that will build upon preservation activities already underway, as well as those that will require new resources.

Sequence of Study Activities
The preservation self-study is divided into three major phases. Phase I, described in ***Chapters 3 and 4*** of this manual, introduces basic preservation issues and pulls together background information about the library as a context for study. This includes a review of:

1. the library's goals and objectives, with emphasis on the preservation requirements implicit in the institution's collecting and service responsibilities;

2. the history of the development of the collections from a physical point of view, including the dimensions and nature of book, manuscript, microform, photograph, audio tape, and other collections; and policies, catastrophes, moves, and other factors that have had (or could have in the future) a significant effect on the condition of the materials; and

3. institutional and external influences affecting preservation goals, including current or expected financial constraints; trends in publishing, scholarship and the library profession; and technological and other developments in the field of preservation.

This introductory analysis orients study participants to basic issues and establishes an environment in which specific needs can be investigated to best advantage.

Phase Two, the central phase of the ***PPP***, involves a review of the major factors influencing a library's ability to care for its collections. Suggested areas of investigation are the physical environment in which materials are housed; the physical condition of the collections; the library's preparedness for disasters that might damage the collections; the status of preservation-related staff and user education; the administrative, organizational, and operational factors that affect the condition of the collections; and resources that might be explored in seeking to develop or expand a preservation program. It is possible to conduct more limited studies by selecting fewer areas of interest. Phase II, discussed in ***Chapters 5-10***, enables the library to gather together and analyze a large body of factual information upon which Phase III decision making and planning is based.

In Phase III, the final phase, the study team develops a long-range incremental plan for meeting preservation needs. The plan is comprehensive and detailed enough to guide a library toward the development of a comprehensive preservation program. The *PPP* study concludes with presentation to the library director of that plan.

Who is Involved?

Library Staff--Study Team and Task Forces
One study team and up to five task forces made up of members of the library staff carry out the planning study. The study team is the critical group, responsible for the overall conduct of the project. Under the leadership of the team chair it prepares the background paper, coordinates the work of the task forces, and produces the final report. The task forces conduct the more specific investigations in Phase II and report their findings to the study team. A project coordinator oversees the mechanics of the study process, handling such things as scheduling, securing meeting space, and duplicating and distributing documentation. This person should have ready access to clerical assistance. The roles of chair and project coordinator may be combined in situations where this is workable.

Library Director
After making the decision to undertake the ***Preservation Planning Program***, the library director continues to play a vital part throughout the project. His or her commitment and support are essential. The study team keeps the director informed of progress, and the director provides a perspective on potential problems and opportunities of which the team might not otherwise be aware.

Association of Research Libraries
ARL provides several resources to support a ***Preservation Planning Program*** effort including this manual, which lays out the procedural and conceptual framework for conducting the study. While each library will need to make some local adaptations, the process described has been tested successfully in a variety of situations and should free the team to concentrate on the content of the study rather than on project design.

An essential companion to the ***PPP Manual***, the ***PPP Resource Guides*** provide the study team and task forces with a solid basis for evaluating existing practice and recommending change. Reports from other libraries that have completed the ***PPP*** are also made available for background and comparison.

Finally, ARL provides assistance to the study team through a series of on-site consultation and training sessions conducted by an experienced preservation administrator. The consultant makes three visits to the library to assist with the definition and resolution of problems and with detailed planning for each study phase, and is available for interim consultations with the study team by telephone. He or she may offer substantive evaluation of the final report and recommendations, and brings an outsider's perspective to the process.

Program Results

Participation in the ***Preservation Planning Program*** will result in an increased understanding of issues on the part of the entire library staff and administration. Both the final report and associated working documents can be used not only to help shape the library's overall planning activities, including internal and external budget development, but to educate those within the parent institution who influence the allocation of resources for library programs.

APPENDIX 1.1
OUTLINE OF STUDY ACTIVITIES

Prepare for the Planning Study

Commit to a Study [library director]
Review available *PPP* documentation
Discuss possible participation with ARL staff
Consult with appropriate library administrators and staff
Consult with appropriate officers of parent institution
Make decision

Launch the Study [director/study team chair]
Select study team chair
Discuss timetable with ARL staff
Acquire *PPP* study materials
Prepare written charge to study team
Announce plans to staff
Appoint study team
Assemble resource materials (see *Appendix 1.2*)
Assemble environmental monitoring equipment for Phase II (See the "Examination of Sample Environments" section of *Chapter 5* of this manual, the "Monitoring Temperature and Relative Humidity" section of the Northeast Document Conservation Center's ***Preservation of Library & Archival Materials***, and the "Environmental Monitoring" section of William Lull's and Paul Banks' ***Conservation Environment Guidelines for Libraries and Archives***. See *Appendix 1.2* for full citations.)

Phase I: Establish the Study Framework

Become familiar with study techniques and local issues [study team/consultant]
- Read *PPP* manual and introductory readings (see *Appendix 1.2*)
- First visit by consultant (Phase I planning)

Prepare background paper [study team]
- Identify information needs
- Gather data
- Analyze data
- Outline background paper
- Develop study assumptions and priorities
- Draft Part I of background paper and discuss with director

Organize for Phase II [study team]
- Review progress
- Select study modules around which task forces will be organized
- Prepare charges to task forces
- Determine size of each task force and select members

Outline Phase II timetable
Draft Part II of background paper

Conclude Phase I [study team/director]
Submit draft background paper to director and others as appropriate
Revise background paper as required
Appoint task force members
Distribute background paper to task force members
Make progress report to staff

Phase II: Determine Preservation Needs

Orient the task forces [study team/consultant/task forces]
Read *PPP Manual*, introductory readings, and background paper
Second visit by consultant (task force planning)

Carry out targeted investigations [task forces]
Identify information needs
Gather data
Analyze data
Draft recommendations

(Note: Study team meets regularly during Phase II to coordinate task force efforts)

Phase III: Planning the Preservation Program

Manage transition from Phase II [study team]
Hear presentations by task forces regarding major findings from Phase II
Discharge task forces with thanks
Organize Phase III work

Conduct final review and analysis [study team]
Study and integrate task force findings
Organize recommendations
Develop implementation strategy
Draft final report

Conclude planning process (study team and director)
Send final report to director, other administrators, and key staff
Revise and produce final report
Present report to director and staff

First steps in implementation begin

APPENDIX 1.2
PPP READINGS

Note:
Preservation is a relatively new and rapidly changing field. Published information is regularly outdated by the emergence of new findings, terminology, and technologies. This fact should be taken into consideration when approaching the older resources cited in the sources below. Several older articles have been included largely because some of the technical information they contain remains fresh and valid, as do most of the issues raised.

Introductory Readings [Study Team and All Task Forces]

Merrill-Oldham, Jan, and Jutta Reed-Scott, eds. *Preservation Planning Program Manual: An Assisted Self-Study Manual for Libraries.* Revised 1993 edition. Washington, DC: Association of Research Libraries, 1993.

Merrill-Oldham, Jan, Carolyn Clark Morrow, and Mark Roosa. *Preservation Program Models: A Study Project and Report.* Washington, DC: Association of Research Libraries, 1991.

supplementary reading
"Introductory Readings" in *Preservation Planning Program Critical Reprints.* Compiled by Jutta Reed-Scott. Washington, DC: Association of Research Libraries, 1993.

Environmental Control [Task Force A]

Lull, William P. "Selecting Fluorescent Lamps for UV Output." *The Abbey Newsletter* 16 (August 1992): 54-55.

Lull, William P. with Paul N. Banks. *Conservation Environment Guidelines for Libraries and Archives.* Albany, NY: The University of the State of New York, State Education Department, New York State Library Division of Library Development, 1990.

Ogden, Sherelyn, ed. "The Environment" and "Storage and Handling" sections in *Preservation of Library & Archival Materials: A Manual.* Andover, MA: Northeast Document Conservation Center, 1992.

Thomson, Gary. *The Museum Environment.* Second edition. London: Butterworths, 1986, Part 1.

supplementary reading
Byrne, Sherry. *Collection Maintenance and Improvement.* One of a series of Preservation Planning Program Resource Guides edited by Jutta Reed-Scott. Washington, DC: 1993.

National Research Council. *Preservation of Historical Records.* Washington, DC: National Academy Press, 1986.

Physical Condition of the Collections [Task Force B]

Drott, Carl M. "Random Sampling: A Tool for Library Research." *College & Research Libraries* 30 (March 1969): 119-125.

"Surveying Collection Conditions" in *Preservation Planning Program Critical Reprints.* Compiled by Jutta Reed-Scott. Washington, DC: Association of Research Libraries, 1993.

supplementary reading
Byrne, Sherry. *Collection Maintenance and Improvement.* One of a series of Preservation Planning Program Resource Guides edited by Jutta Reed-Scott. Washington, DC: 1993.

Organization of Functions [Task Force C]

Association of Research Libraries, *ARL Preservation Statistics, 1991-92.* Washington, DC: Association of Research Libraries, 1993. (See also statistics for 1988-89, 1989-90, and 1990-91.)

Banks, Jennifer. *Options for Replacing and Reformatting Deteriorated Materials.* One of a series of Preservation Planning Program Resource Guides edited by Jutta Reed-Scott. Washington, DC: 1993.

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CHAPTER TWO
PREPARATION FOR THE PLANNING STUDY

The Decision

The library director makes the decision to participate in a preservation planning effort after consulting with appropriate administrators and staff, particularly those directly responsible for the care and condition of the library's collections. He or she may also consult with officers of the parent institution, both to stimulate interest in the project and to lay the groundwork for securing an organizational commitment to program implementation. The allocation of personnel and other resources to preservation planning is motivated by the potential that it will yield the information, staff support, and detailed action plan necessary to improve and amplify the library's ability to preserve its holdings.

Forming the Study Team

The importance of the study team cannot be overemphasized, since it has ultimate responsibility for managing the project. The quality of the investigations that are undertaken, and the nature and effectiveness of the recommendations that are made, are dependent on study team members.

The Chair

The study team chair, appointed by the director, should possess strong leadership, organizational, and coordinating skills; and have the confidence of and access to senior administrators and staff. The chair is the principal catalyst and major integrating force within the study, and is responsible for ensuring that the study team performs effectively. He or she should have a keen interest in the library's collections and its preservation problems, but need not have preservation expertise at the outset of the project.

Considerable administrative support will be necessary for the efficient conduct of the study, which will involve setting schedules that are workable for team members; securing meeting space and accouterments; acquiring, circulating, and arranging for group viewing of information resources; duplicating and distributing drafts, reports, and other documentation; and arranging accommodations and local transportation for the consultant. These responsibilities may be assigned to the chair or to another staff member appointed to serve as project coordinator. In either case clerical assistance will be required. Where a project coordinator is appointed, the chair and coordinator must be able to work closely and easily together.

The library director and the chair should spend some time discussing the duties of the position, establishing ground rules (for example, how time conflicts are to be resolved, how closely the director is to be involved), and reaching a mutual understanding of goals and expectations. Other administrators should be involved as appropriate. For example, if the chairperson is a department head, the associate director to whom he or she reports will participate in preliminary and ongoing discussions.

Team Members

Selection of study team members should focus on securing a wide range of skills and a broad knowledge base within the team. Credibility is an important factor, for the team will depend on cooperation from many staff members in carrying out its work, and acceptance of its findings and recommendations will hinge in part on the degree of respect and support accorded its members by others.

The group should be large enough to ensure this breadth, but not so large as to risk inefficiency, or to diffuse members' sense of individual responsibility. A team of five to seven people is generally most effective, with many others serving on task forces or contributing through informal assistance with specific portions of the investigations.

In appointing the team, the director will consult with other administrators and with the study team chair. To the extent possible, selection should be made on the basis of a staff member's potential for contributing to the study, rather than on availability. All concerned, especially the managers and immediate colleagues of team members, should be made aware that appointment to the team will take members away from routine responsibilities for a significant portion of time during the study process. Temporary reassignments may be appropriate in some areas to maintain daily operations.

Among the factors to be considered in selection:

- Team members should possess a good understanding of the organization and operations of the library.
- The make-up of the team should reflect the fact that preservation is a system-wide concern, with important implications for all units and all levels of the professional and supporting staff.
- Members should have analytical ability--that is, they should be able to recognize the key elements of issues; and their interrelationships, relative importance, and how each contribute to the whole.
- Members should have the interpersonal skills needed to interact effectively with other team members and with the rest of the staff during the data-gathering, interviewing, and observations that form the heart of the investigations.
- The team should include some members familiar with the library's current preservation activities (commercial binding, repair, replacement, etc.), but knowledge of preservation is not a requirement for all team members. Indeed, much can be gained by involving those with little previous exposure.
- If there are staff members who have developed a special interest in any aspect of preservation through experience or training, their expertise should be available to the team either through regular membership or through appointment as resource people.
- Some writing skill is essential. Each member need not be an expert writer, but all will share in drafting working papers and reports, and at least one person should be a proficient writer to ensure a readable, clear, concise final report.

- Because considerable personal and professional development is likely to take place as a result of participation in the study, selection can be partly based on potential for development and openness to change.

The Charge

The charge, prepared by the director, creates a framework for the study, establishes the team's authority, and guides its efforts. It should spell out the goals and scope of the study, indicate the degree of importance the administration attaches to it, and include an expression of commitment to act on the study results. The charge should be brief and to the point, and cover the following elements:

- rationale for the study,
- major issues to be investigated,
- roles and authority of participants,
- time and product expectations, and
- commitment to respond to recommendations.

Examples of charges to study teams appear in the final *PPP* reports prepared by other libraries.

Informing the Staff

The ***Preservation Planning Program*** will affect most members of the staff and, ultimately, is likely to influence the way work is done in almost every unit. Staff-wide awareness and understanding of plans and goals is therefore essential from the outset, to ensure full cooperation in the data-gathering stages and acceptance of the final results.

The decision to participate should be promptly communicated to the entire staff, and appointments to the team and task forces generally announced. Staff should also be kept informed as the study progresses. This can be accomplished through newsletters, and formal and informal written and oral reports. The enthusiasm of team members and staff can do much to transform study results into a powerful working tool.

CHAPTER THREE
PHASE I: ESTABLISHING THE STUDY FRAMEWORK

Preservation Study Model

The scope of a library's preservation needs is dependent upon the interplay of three factors. The first of these is the physical nature of the materials that make up the collections. Most information media are inherently unstable. The rate of natural deterioration varies widely, from early papers that show few signs of aging after several hundred years, to some modern papers that turn dark and begin to weaken in ten; from glass plate negatives that break, to photographic prints that fade and vinyl disks that scratch. Each type of material has a unique life cycle, based on its chemical and mechanical characteristics.

The second factor is the storage conditions in which the collections are housed. The temperature, humidity, light, and air quality within library buildings; the design and condition of the buildings themselves; and storage structures such as shelving, cabinets, and cases all have a significant influence on the rate at which library materials deteriorate.

The third factor is the nature and level of care, handling, and use that collections receive, including processing, shelving, circulation, binding, repair, and storage procedures; the condition of machinery such as microfilm readers and tape players; the way that staff and patrons handle materials; and whether use is light or heavy.

The *PPP* is predicated on the assumption that it is possible for libraries to design and implement programs that will help to control and shape these three factors for the purpose of protecting collections, improving their condition, and extending their useful life. The model for such a program, outlined and discussed in *Chapter 7*, is based on the 1991 ARL publication, *Preservation Program Models: A Study Project and Report* (see *Appendix 1.2* for a full citation). The report, organized around ten program components, describes a comprehensive, long-term approach to addressing a library's preservation needs. These ten components are preservation administration, environmental control, replacement and reformatting, conservation, mass-deacidification, commercial library binding, shelf preparation, and staff training and user awareness.

Throughout the *PPP* study preservation is viewed as an addressable issue, and the ten programmatic components articulated in *Preservation Program Models* examined in different ways and from several perspectives to answer these questions:

- Does the library currently have the program component in place?
- Is the program component appropriately organized, staffed, and administered?
- Is the program component of appropriate scope? Are its capabilities commensurate with the needs of the libraries?
- Are there program components that should be created, reshaped, or expanded?

A variety of study techniques will be used in the process of gathering a substantial body of data, analyzing it, and preparing recommendations that can guide a library toward establishing a rational, effective preservation effort.

Study Techniques: Gathering Data

The planning study uses two types of information: "hard," or factual, data such as the cost of binding; and "soft" data such as individual and collective perceptions of the library's goals and service mission.

Each of the three phases of the investigation involves identifying information needs, determining what is available and how to acquire it, and deciding who gathers and analyzes it. Information requirements should be identified in terms of both the type and amount of detail required to understand the topic being investigated. Analyses of some topics requires extensive statistical data, while other topics require only limited cost figures or summary descriptions.

Collecting study data can be as simple as sharing information in a group discussion; or as complex as developing a hypothesis, taking measurements with sophisticated instrumentation, and inputting and analyzing the data using appropriate computer technologies. Despite an infinite range of research approaches, methods for collecting data can be grouped into four very general categories.

Observation

Observation germane to the *PPP* study might include scanning stack ranges and work stations; watching staff members process materials, make bindery decisions, or shelve materials; and watching patrons use and return materials. Observation is a useful data-gathering technique when concrete information regarding behavior is needed, and is most commonly associated with work measurement and work flow planning. Observation is of particular value for preservation planning in libraries because many potentially harmful activities are considered so mundane that they have become "invisible." Observing to gather information has the following advantages and disadvantages:

Advantages	Disadvantages
Data is collected first-hand and is subject only to the interpretation of the observer	Limited to activities that are observable
Allows detailed examination of specific activities	Requires careful determination of data needed
Enables collection of information without cumbersome procedures	Staff may be uncomfortable with the process

Reading

The nature of the reading that is done throughout the planning process falls into two categories:

1. studying the professional literature to gain a solid general understanding of the field of library preservation, and to learn about preservation policies and procedures in place elsewhere as a basis for comparison with local activities; and

2. reading internal reports, memos, correspondence, and statistics to discover what has been done, or is thought have been done, within the institution. Historical events that have shaped present practices can often be traced through a document trail.

Advantages	Disadvantages
Often readily available and can be revisited easily	May be voluminous, hard to organize and digest
Provides concrete evidence	May be out of date
Offers a point of departure for other investigations	

Interviews

Questioning key people, one-on-one, is a technique well suited to the task of determining what preservation work is being done within the institution. Preliminary interview guides should be prepared to ensure a systematic approach and compatibility of information. Summaries of results should be provided to interviewees, both as a courtesy and to check the accuracy of the report.

Advantages	Disadvantages
Discussion can build on, clarify, or correct data collected elsewhere	Time consuming
Provides a wide range of opportunities for staff input	Requires interview skills
Provides the opportunity to ask questions	May build unrealistic expectations among interviewees

Surveying

Written questionnaires and survey instruments can be used to collect comparative data about environmental factors, binding and repair policies and practices, the physical condition of collections, staff training practices, and other factual data. Surveys are particularly useful for developing systematic information about activities and collections that are either organizationally or geographically diffuse.

Advantages	Disadvantages
Can secure a large amount of data relatively quickly	Difficult to design a good questionnaire
Allows comparison of data over time	Some data (e.g., from environmental monitoring) is most effective when compiled over a longer period of time than possible during the *PPP* study

Study Techniques: Planning and Problem-Solving Methods

The appendices to this chapter present several techniques for planning and problem solving. The study team and task forces will find the model action-planning worksheet (***Appendix 3.1***) useful for articulating and accomplishing goals. The brainstorming technique (***Appendix 3.2***) can be valuable when considering issues, analyzing problems, and seeking solutions. The force field and cost/benefit analyses (***Appendices 3.3*** and ***3.4***) assist with the development of solutions to complex problems. The ranking procedure (***Appendix 3.5***), with its grid approach to analyzing the impact and feasibility of potential actions, is an effective tool for putting recommendations in priority order.

Study Techniques: Apportioning the Work

The study team and task forces will carry out certain tasks as a group. Some work will be assigned to sub-groups that include study team members, task force members, and/or other staff. Yet other tasks are performed best by individuals. For example, reading and summarizing documents, interviewing, and observing can be done effectively by individuals; designing questionnaires and compiling responses is accomplished more effectively in a small-group setting; and determining overall investigative strategies, exploring major issues, and evaluating masses of information are tasks best taken on by the whole group.

The Three Study Phases

The three phases of the *PPP* study are progressive, with each element building on the preceding ones. In Phase I, participants begin the process by seeking a general understanding of a broad range of issues, thereby creating a context within which certain topics can be examined in depth. This is accomplished by conducting a background study of the forces, conditions, and trends, both internal and external, that affect the library's ability to preserve its collections. Findings will lead to the development of planning assumptions and priorities that shape the second phase of the study.

Phase II is the heart of the investigation, aimed at identifying and documenting the library's preservation needs and the resources that could be tapped to address them. Typically, there are five major focuses of study: environmental conditions in library buildings, the physical condition of the collections, operational components that might make up a preservation unit, disaster preparedness, and preservation-related staff and user education. Five task forces (A through E) carry out these investigations and develop preliminary recommendations based on their findings. Task force recommendations form the basis of the study team's work during the third phase of the investigation.

In Phase III, the study team integrates the information and recommendations provided by the task forces in order to create a unified, consistent strategy for preservation program development or enhancement. The resulting implementation plan organizes potential action items in a sequence that reflects the library's goals and resources, and the constraints under which it must operate. The report presents, in a clear and convincing way, a comprehensive portrait of the library's most significant preservation needs, and the opportunities that administrators might pursue for meeting those needs.

The final report is the culmination of the ***Preservation Planning Program***, but it is also a prelude to managed change.

Phase I Begins

The first phase of the Preservation Planning Program begins formally with the appointment of the study team. In an introductory meeting the chair and team members review the charge and discuss the general nature of the project. All members are made aware of the responsibilities and commitment of time involved in participation. Copies of this manual are distributed, and arrangements made for circulating or otherwise making accessible the introductory readings. Team members should read the entire *PPP Manual* prior to the consultant's first visit, so as to be familiar with the structure and sequence of study activities. They should also complete as much additional background reading as possible, beginning with ***Preservation Program Models.***

The First Consultant's Visit

During the first visit the consultant presents an introduction to preservation issues, reviews in detail the techniques and procedures to be used in the study, and works with the team to develop specific plans for Phase I activities. The one- or two-day visit will generally include the following:

- a meeting of the consultant, the library director, and study team chair to review goals, expectations and scheduling;
- an orientation session devoted to reviewing the planning process and introducing study techniques, in the context of the preservation issues perceived by the director and team to be of most importance;
- a planning session in which specific tasks for the conduct of the Phase I are identified, organized, and assigned;
- one or more informal sessions, perhaps at meals, to enable the consultant to get acquainted with the team and other key staff members and administrators; and
- a brief tour to provide the consultant with a general sense of the layout and other physical characteristics of the library.

APPENDIX 3.1
ACTION-PLANNING WORKSHEET

The preparation of a detailed action plan is critical for the accomplishment of particular objectives within a specified time period. Planning includes the following activities:

1. Identify the specific tasks that must be accomplished to achieve a desired result or to produce a particular product (e.g., a report or manual).
2. Identify the resources needed to perform each task.
3. Work backwards from the final deadline to establish a timetable for completion of each task.
4. Assign individuals or groups to each task.

Complex activities may require several subsidiary action plans, with intermediate products and deadlines leading to the final result. Careful analysis of requirements and coordinated timing promote efficiency and encourage the wise use of human and material resources. Such action planning makes clear who needs to do what, and by when.

The sample on the following page illustrates how a worksheet can facilitate planning. Software that graphs responsibilities in relation to time lines and goals is helpful for this purpose, but if there is no one on the study team who is an experienced user, time may be better spent on various aspects of the preservation study itself than on mastering a new computer program.

Objective: To produce the Background Paper

Responsibility	Tasks	Resources	Target
Study team	Identify information needs, assign responsibility	*PPP Manual, Chapter 4*	May 1
Members A, B	Gather and analyze information about university programs, institutional setting; prepare key points for discussion on target date	University reports, catalogs, statistics, and organizational charts; library reports; interviews with Q, R, S	May 15
Members C, D	Gather and analyze information about library holdings; prepare key points for discussion on target date	Library reports, collection development policy, ARL statistics; interviews with T, U, V, W	May 22
Members E, F	Gather and analyze information about external factors and trends; prepare key points for discussion on target date	Current library literature, with emphasis on preservation-related journals and newsletters	May 29
Members A, C	Gather and analyze information about the library's preservation history; prepare key points for discussion on target date	Library and departmental reports; ARL preservation statistics and other statistics; interviews with X, Y, Z	June 7
Study team	Brainstorm planning assumptions based on findings. Outline paper, assign writing of sections.		June 8
Study team	Complete drafts for distribution and review		June 29
Study team	Discuss drafts and potential revisions		July 6
Study team	Make necessary revisions; distribute for review		July 13
Study team	Final edit	The most skilled writer in the group	July 27

Product: Part I of Background Paper

APPENDIX 3.2
BRAINSTORMING

Brainstorming is an invaluable technique for generating new ideas. It is often used informally in a variety of planning and problem-solving situations, but can be even more effective when used formally. The approach was developed by Alex Osborn, and has since been expanded and modified through research and application in many situations.

The key to success in using this technique is to separate idea generation from idea evaluation, thus stimulating the creation of a rich pool of options. Experience indicates that a group will usually compile a larger number of innovative ideas if it follows a deliberate procedure such as the one outlined below.

1. Select someone to lead the discussion and to list ideas on a blackboard or flip-chart.

2. Discuss briefly the need to be open-minded and non- evaluative in the first stage, agreeing that unusual, "far-out" ideas are acceptable.

3. Present the issue, and allowing time for participants to consider it and make personal notes. In a problem- solving setting, the first round might focus on "factors contributing to the problem," with later rounds exploring potential solutions, resources required, and positive and negative consequences of taking action.

4. List ideas aloud, in round-robin fashion: leader asks for one idea from each member, repeating the cycle several times and then letting contributions flow randomly. Stretch the efforts of the group to ensure that all ideas are exhausted; do not stop at the first or second slump in the discussion.

5. Evaluate the ideas and come to a decision:

    - Organize ideas into several categories to clarify issues, illuminate their interrelationships, and reduce their number.

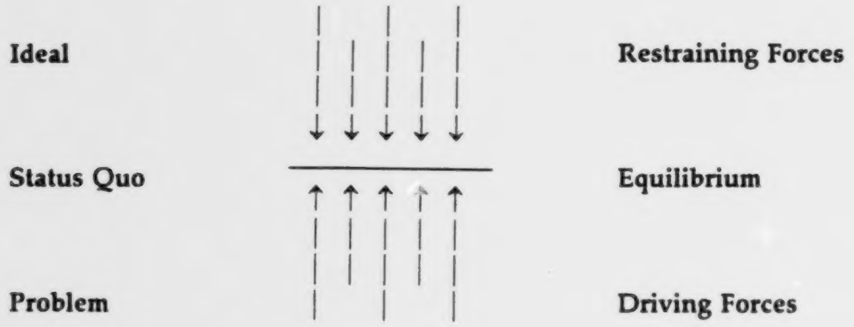
    - Select two or three that seem most significant or useful--i.e., the most important factors in the situation, the most practical approaches to the problem, the resources that will help the most. This will often involve reworking or combining elements from the original list of ideas.

    - Analyze each idea, weighing pros and cons, and select the one most likely to achieve the desired result.

Groups unfamiliar with brainstorming, or new to working together, might begin with a fifteen-minute warm-up exercise. Brainstorm a neutral issue, such as "uses of a piece of cheese" or "low-budget vacations," to stimulate creative thinking, openness, and comfortable interaction.

APPENDIX 3.3
FORCE-FIELD ANALYSIS

Originally developed by Kurt Lewin, force field analysis explains stable situations--such as a problem that persists over time with little movement towards resolution--in terms of a balance between two fields of force. One field pushes to resolve the problem (driving force), and the other pushes to maintain the status quo (restraining force). Change can occur only if the balance is altered, either by strengthening the driving forces or weakening the restraining forces, or both.



Example 1--Desired change: Introduction of a new preservation procedure in the library
There may be a number of factors that favor such a change:

- improving the life-expectancy of materials,
- reducing replacement costs, and
- improving service to patrons.

At the same time, several factors may work against the change:

- lack of funds,
- need for some people to learn new skills,
- different perceptions of the value of the new procedure, and
- inconvenience to some people.

Change may be accomplished by recognizing the factors and devising ways of strengthening the driving forces and reducing the restraining forces:

- locate new funding,
- establish a training program to help resisters overcome their reluctance to change, and
- implement the new preservation procedure with more popular changes to heighten motivation.

The Analytical Process

A formal force field analysis involves the following steps:

1. Describe the present situation.
2. Specify the change desired.
3. List (brainstorm) all factors that may influence the situation.
4. Sort the list into driving and restraining forces.
5. Identify the two or three strongest forces on each side.
6. Develop ideas for strengthening the driving forces and/or reducing the restraining forces.

Change is most likely to begin at those points where stress and strain exist. Increased stress may lead to decreased satisfaction, which can become a motivation for abandoning the status quo. Often, however, increasing a driving force may stimulate a corresponding increase in the opposing force. In such cases, strategies for reducing the restraining force at the outset will be more effective. There are also times when change can be effected by reversing the direction of a force, generally by introducing new information or resources that result in modified perceptions, interpretations or attitudes.

A major strength of this analytical technique is its structured approach to identifying and sorting the numerous, often unrelated factors that influence a situation. This can create a climate for charting new directions, while avoiding no-win conflict situations.

Example 2--Desired change: Control of light to reduce damage to materials

Driving forces	Strategies for increasing them
Deterioration of materials and the associated costs of repair and replacement Loss of irreplaceable items	Assemble examples of materials damaged by light Gather data to document costs
Concern of preservation and collection development staff	Share concern through reports and dialogue

Restraining forces	Strategies for decreasing them
Organizational ignorance of the effects of light	Inform/educate
Ignorance of light levels in the library, and the percentage of ultraviolet radiation	Monitor
Cost of change	Implement changes in increments (install UV-filtering lenses on a single floor each year Document the economics of long-term energy savings resulting from the installation of timer switches

APPENDIX 3.4
COST/BENEFIT ANALYSIS

While many improvements in a library's preservation program may be made at little or no additional cost, some will be extremely expensive. Cost/benefit analysis provides a way of estimating whether the desired results of change are worth the cost.

For example, upgrading the filtration system in a central heating, ventilating, and air conditioning system will be costly. The upgrade, however, will likely have substantial long-term benefits:

- cost savings realized through reduced damage to materials and increased longevity,
- reduced need for cyclical vacuuming programs, and
- cleaner environment for staff (and perhaps less illness).

The major difficulty in cost/benefit analyses is that while most costs can be calculated fairly accurately, benefits are often difficult to quantify. In the example above, the cost of redesigning and replacing a filtration system can be calculated with accuracy, but savings from reduced damage to materials can only be estimated by monitoring the effects of soot and pollutants over a long period of time. In some instances, therefore, benefits must be described in qualitative terms, and in the absence of quantitative information, a judgment made as to whether costs are justifiable.

Cost/benefit analysis is a process that, by weighing costs and benefits, enables an organization to compare different approaches to performing a task and select the most effective one. Steps are as follows:

1. Identify alternative approaches to meeting a goal.
2. Determine the benefits of each, in quantitative terms if possible.
3. Calculate the costs of each approach.
4. Select the alternative that yields the greatest benefits at a tolerable cost.

APPENDIX 3.5

RANKING RECOMMENDATIONS AND ESTABLISHING PRIORITIES

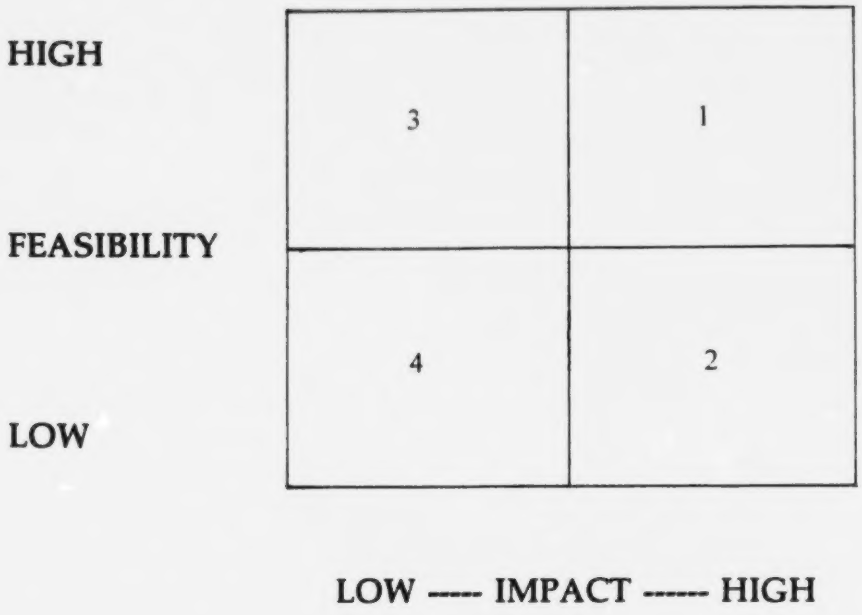
The total number of task force recommendations will usually be larger than what the study team can handle within the immediate context of the *PPP* study, and some issues will need to be dealt with after the study is completed. Limits and priorities must be set. The ranking of recommendations begins by evaluating them from two perspectives: the significance of their impact on the collections, and the degree to which their implementation is feasible. The intersection of these two values is then used as a guide for priority setting.

Criteria for setting priorities include:

> ***The potential impact of implementing the recommendation***
> High impact recommendations are those that will result in dramatic improvement in the condition of materials; a substantial increase in the efficiency of current preservation activities; a substantial decrease in the rate of deterioration of materials; or considerable savings of time, energy, or money.
>
> ***The feasibility of implementing the recommendation***
> There are likely to be significant differences in the resources required to implement each recommendation. If it is not likely that a problem can be resolved because of the difficulty involved, the team should concentrate on other, more promising issues. For example, a space problem frequently means that the library needs to renovate or construct facilities. If there is little possibility that the library will build in the near future, the study team will accomplish more by focusing its attention elsewhere.
>
> ***Urgency***
> An issue can be described as urgent if waiting to resolve it would result in additional problems, or a missed opportunity. After establishing the impact and feasibility of each recommendation, the team should give higher priority to those that require immediate attention.
>
> ***The amount of time required to implement a recommendation***
> When achievement of a recommended goal is likely to take more than a couple of months, it ought to be subdivided into short-term objectives to simplify action planning and the monitoring of progress. For example, one task force may recommend the development of a comprehensive preservation policy or procedures manual. The study team may determine that this would have significant impact on the library's performance, but would take many months to complete. Staff might therefore concentrate on developing a timetable and guidelines for constructing the manual, as a first step toward the final goal.

The first two criteria, impact and feasibility, are closely related and should be considered together. A grid can be a useful device for ranking factors in a comprehensible way.

GOAL SELECTION GRID



In Box #1 place high-impact recommendations that can be implemented with little difficulty. Box #2 contains high impact recommendations that will be difficult to carry out. Recommendations that are not difficult to implement but that will have little impact go in Box #3, and those that are difficult and will have little impact go in Box #4.

This arrangement makes it apparent that some potential actions deserve more attention than others. Recommendations in Box #1 are probably highest priorities, since they can be accomplished easily and will have significant impact. Those in Box #4 can usually be disregarded in that they achieve little while requiring great effort. Many of those in Box #3 can also be eliminated because they yield little--though some may be worthwhile because they are easy to accomplish. Recommendations in Box #2 need careful consideration despite their difficulty, because of their potentially high impact.

CHAPTER FOUR
PHASE I: PREPARATION OF THE BACKGROUND PAPER, AND PHASE II: PLANNING

The Background Paper

Following the consultant's first visit, the study team has two major assignments: to prepare a background paper and to plan for Phase II. The background paper provides for the study team and for task force members a general overview of the library and its parent institution, viewed from a perspective that will support extended assessment of the institution's obligation and ability to preserve its library collections. The paper reflects the fact that libraries operate within larger systems, interacting not only with the parent body (a university, a city), but within a larger arena (higher education, government), with the publishing and information industries, with technological systems, and with the library profession. Success with preservation endeavors depends in large part on the ability of the preservation leadership to adapt to, influence, and learn from these external systems. To do so, organizational relationships must be understood, and constraints recognized.

The background paper will comprise descriptive information, and a resulting set of assumptions that will shape the central phase of the study. The investigation upon which the paper is based focuses on six related areas:

1. a brief historical overview of the library in its institutional setting;
2. the development and nature of the library's collections, with emphasis on factors that have influenced their current condition;
3. the history of the library facilities and the general environmental conditions that exist throughout the library system;
4. past and present preservation efforts;
5. external factors affecting the library's preservation needs and resources; and
6. planning assumptions.

A description and sample outline for the background paper appear in *Appendix 4.1*. The paper should be concise and highlight key trends. Its purpose is to provide a broad overview and summary of the major factors that have a bearing on the study. The process of preparing it allows the team to practice investigatory and analytical techniques, and lays the foundation for gathering additional information during Phase II.

Conducting the Background Study

Several kinds of information must be assembled and reviewed in order to develop the background paper:

- descriptive information about the library and the institution, such as mission and goals statements, listings of major academic and library programs and services, characteristics of the user population, circulation figures and other measures of use, and collecting policies;

- historical data (found in annual reports, institutional histories and archives; and through interviews with long-term staff members and administrators) that illuminate events and policies that have influenced the nature and condition of the collections;

- the history of the library's preservation efforts, and information about existing preservation activities, staffing, expenditures, and output; and

- general background on such external factors as past and current developments in libraries, both in North America and internationally; and in the publishing industry, professional organizations, and granting agencies--as they relate to preservation needs and challenges.

The team begins by listing the specific information it needs, and probable sources. (The brainstorming technique described in ***Appendix 3.2*** is an effective method for developing these lists). Individuals or sub-groups are then assigned to gather the information for presentation to the whole team, either as an oral summary of findings or as a written draft that will ultimately become part of the background paper. Follow-up discussion among members will often raise additional questions that lead to another brief round of data gathering, after which the complete text of the first portion of the paper can be drafted. The sample work sheet in ***Appendix 3.1*** may be a useful model for assigning responsibilities and setting goals, but tasks will break down differently in different libraries depending on the amount of time each study team member can spend on investigation, the amount of information that is readily available, the size of the institution, and a variety of other factors. Phase I should take approximately three months from start to finish. Keep in mind that its purpose is to lay the groundwork for in-depth investigation.

Throughout this process, team members should be watchful for the potential opportunities and limitations that must be taken into account in planning the next phase of the study. Examples of the types of institutional assumptions that might emerge from the background study follow:

- Declining public support and rising costs will place the institution and the library under increasing financial pressure. A prolonged period of retrenchment is suggested, and competition for funds will become more severe. Within the library, the cost of installing and servicing new technologies will require significant resources.

- The institution's basic commitment to humanistic studies, with their heavy reliance on retrospective materials, is solid.

- A senior member of the university administration has done extensive research in the social sciences, and is familiar with and concerned about the brittle book problem and the general condition of research collections.

- Regional expansion of bibliographic networks will put new stress on portions of the library's collections.
- The library will acquire new forms of media that present complex preservation problems.
- The past pattern of financial support for the acquisition and care of rare books cannot be assumed for the future.

Based on its list of assumptions, the team next develops priorities for the study. The four to six concerns that are selected for special emphasis should flow naturally from the descriptive report. They highlight critical issues, or problems for which solutions are urgently needed. Some examples of priority statements:

- Preservation concerns must be incorporated into current planning for a new storage facility.
- Dispersal of preservation functions throughout the library system, and lack of various kinds and levels of preservation expertise, have a negative impact on the physical condition of the collections and must be addressed.
- Lack of awareness on the part of administrators, staff, and library users, about the condition of the collections has resulted in their neglect. Renewed attention is critical.
- Methods must be found for predicting and minimizing the physical effects of rising interlibrary loan use.

Once consensus has been reached, Part I of the background paper, the assumptions and priorities section, should be completed. This section will guide the task force investigations that take place in the second phase of the study.

Presenting Part I of the Background Paper

The draft of Part I is forwarded to the library director in preparation for a meeting of the director, other senior administrators as appropriate, and the team. Discussion at the meeting focuses first on the major assumptions and priorities identified in the background paper, and the importance and validity of each. The study team may subsequently amend the draft based on administrative feedback. The group next agrees on a plan of action for Phase II of the study, on the criteria for selecting task force members, on a method for making and announcing appointments, and on the ways in which staff not directly involved in the process are to be kept informed.

Planning Phase II

From here, the final portion of the background paper can be developed. It includes a description of the overall plan for Phase II, the task force charges, and a schedule of target dates. The second phase differs from the first in two respects: First, the investigations will be much more detailed in nature than those conducted to prepare the background paper. Second, the studies will be carried out by several separate groups, each chaired by a study team member. This greatly expands the responsibilities of the team members, who must also hold brief but regular meetings throughout the second phase to coordinate the work of their task forces.

In order to plan and manage effectively, team members must thoroughly understand Phase II procedures. A careful reading of ***Chapters 5*** through ***9*** should precede the first planning session so that the team can identify changes that are required to adapt procedures to local conditions.

The Task Force Approach

There are several reasons for employing task forces in the second phase:

1. to use staff knowledge and skills to maximum advantage;
2. to provide an opportunity for more staff to become involved, and to learn more about the library and about preservation;
3. to accomplish more within a limited amount of time; and
4. to dissipate strain on normal library operations by spreading the work among many.

The ***PPP Manual*** presupposes the use of five task forces to carry out the investigations described in ***Chapters 5*** through ***9***, but it may be appropriate to configure task forces differently. For example, a library already having an up-to-date disaster preparedness and response plan will forego Task Force D, but may be interested in looking at commercial library binding, conservation, and reproduction in great depth. In this case, two separate task forces might be created to study the operational aspects of a preservation program (***Chapter 7***). Based on these types of considerations, the team defines the role of each task force, determine its size and composition, selects members, and prepares a basic schedule for Phase II. Since the task forces are created to assist the team, it is crucial that arrangements and scheduling enable the team to keep informed about all activities, to minimize overlap, and to ensure that the goals of this phase are met.

Each task force has three primary responsibilities: to gather data, to analyze it within the context of the particular subset of preservation issues it is assigned, and to identify and evaluate potential recommendations for action based on the findings. The written charge should make these responsibilities clear, outlining the scope of the investigation and expected results, and stating a deadline for completion of the work.

Presenting the Completed Background Paper and Informing Staff

When Part I of the background paper has been reworked, if necessary, in response to the first administrative review, the task forces delineated and charges prepared, task force members selected, and a schedule developed, the completed paper is ready for presentation to the director. Again, amendments may be required. After the director and other administrators have reviewed the final draft of the paper and the director has accepted it, including the study team's selections for the task forces, the director extends to each proposed task force member an invitation to serve. It is important to prepare and present an executive summary to staff at this time, and to make the final report available to those who would like to see it. Staff should be kept informed about plans and progress throughout the study process, either in writing or by way of reports at regularly-scheduled or special staff meetings. Ultimately, the success of a preservation effort depends to a great extent on strong staff support.

The Second Consultant's Visit: Orienting the Task Force Members

Upon appointment, each task force member is provided with the background paper and ***PPP Manual***. Prior to the consultant's visit, each task force member reads the first four chapters of the ***Manual***, and the chapter devoted to the topic being investigated by his or her task force. ***Preservation Program Models*** should be read either before the visit or as soon as possible afterwards. This visit will generally include the following elements:

- a brief meeting of the director and consultant;
- an informal gathering for all task force members with the team and consultant;
- a meeting of the study team and consultant to review progress, discuss general plans for Phase II, and plan the orientation session for task force members;
- a meeting of all task force members and the study team, led by the consultant, wherein organizational and preservation issues, the study process, the team's background paper, expectations, time lines, and other topics can be discussed at length and questions answered;
- separate meetings of the consultant with each task force to develop specific plans for beginning the investigations.

APPENDIX 4.1
ABOUT THE BACKGROUND PAPER

Purpose
The background paper establishes a context, states key issues, and identifies the means for exploring those issues during the second phase of the project. Its primary function is to provide a common understanding among the team and task force members of the expectations, possibilities, and limitations that will affect the study.

Form
Because this is an interim document, it should not divert energy from the substantive work that is to follow. The background paper should be relatively brief--perhaps twenty or thirty pages total (including charges to the task forces and schedules). A list of topics that might be included in the text appears below. It should be adapted to suit local conditions.

Distribution and use
The paper is intended to inform the director, senior administrators, and task forces. An executive summary should be distributed to the staff at large, and the entire report made readily accessible.

Potential Topics for inclusion in the background paper

1. *Institutional setting of the library*

- general description and history of the parent institution, major academic programs and priorities, major financial factors, and place of the library within the parent institution;

- library resources and internal organization: size, major characteristics of collections, staffing, organizational structure, major financial factors;

- library programs: goals and objectives, services, user population, major trends in policy and program development; or

- preservation implications: institutional goals, interests, and support, format requirements implicit in service responsibilities (e.g., original manuscripts for research, audio and video materials for instructional support).

2. *Library history, focusing on implications for preservation of the collections*

- the collections: types of physical formats acquired, retention and replacement policies;

- facilities: their age, condition, major shifts of collections among them, disasters;

- collections maintenance practices: circulation policies; access to stacks; binding, repair, storage, and handling practices; or

- development of local preservation activities: major problems and achievements; relationship of existing preservation activities to other library programs.

3. *External factors*

- publishing trends: developments in book and journal production methods (binding and paper quality); growth in the use of non-paper media including magnetic tape, various types of disks, and on-line distribution of information;

- developments in the library profession: implications of networking and resource-sharing, emerging staffing and organizational patterns, availability of trained personnel, opportunities for preservation education, activities and interests of library associations and funding agencies that target libraries and preservation activities; or

- emergence of profession-wide preservation awareness and response (research and development, growth of preservation programs in institutions, cooperative initiatives).

4. *Planning assumptions*

- apparent seriousness of the local preservation problem,

- institutional and fiscal constraints,

- major strengths and resources, or

- priorities for the study.

5. *Phase II Plan*

- task force charges, or

- time table

CHAPTER FIVE
PHASE II: ENVIRONMENTAL CONTROL
[Task Force A]

Introduction to Environmental Issues

The environment has a direct and continuing effect on the physical condition of all animate and inanimate objects, influencing the rate at which natural processes occur, and often introducing elements that alter the nature and direction of those processes. The degree to which inanimate objects are susceptible to the surrounding environment depends upon their structural and chemical makeup. Some materials are very stable through a broad spectrum of conditions, while others can tolerate little change in their surroundings without themselves undergoing change.

In the range from granite to snowballs, the life of most library materials lies in a middle zone. Narrowing the universe to objects that are typically collected by libraries and archives, however, we see a tremendous variation in the shelf life of information-carrying media. There is evidence that some have the potential to last many thousands of years. The oldest paper sample discovered to date, for example, is reported to have been made in the first century BC. The life of some types of compact disks, however, has been estimated by some researchers to be as short as 25 years. Whether a medium is long- or short-lived, its inherent potential to remain useful over a given life span is often unfulfilled. The life of a book stored in the dark at absolute zero may be indefinite. Shelved on the seventh floor of an unairconditioned stack tower, where the temperature soars into the 90s on a summer day and drops into the 70s in the evening; and where the relative humidity swings from 10% to 80% depending on the season and the weather, that same book may be so brittle within 40 years that its pages crack apart in response to minimal handing.

Temperature, relative humidity (RH), light, air quality, and the activities of bacteria and higher life forms, are the environmental factors that must be controlled to ensure maximum use from library materials. While creating hospitable storage environments can be tremendously difficult, and even unrealistic in older buildings, there is no more important preservation-related goal. Most preservation investments affect materials one-by-one, or in relatively small groups (a book is repaired, a journal microfilmed, ten boxes of maps gaseously deacidified.) Installation of a new, appropriately designed heating, ventilating, and air conditioning system, however, can buy time for every item in a library collection.

During the 19th and 20th centuries, many events have conspired to make it difficult not only to achieve an ideal environment for long-term storage of library materials, but also to determine exactly what that environment should be. For example:

- The nature of modern library collections has changed. Where once, paper and parchment dominated (complicated mostly by their integration with inks and paints, adhesives, board, thread, and other animal skins), today we must contend with a seemingly infinite variety of media. Many are made up of complex combinations and multiple laminates of materials, including a broad range of plastics, metals, dyes, glass, and other components. Optimal storage conditions for one material can be entirely different from those for another, and optimal conditions for long-term storage can vary significantly from optimal conditions for use. Where recommended RH for storage of microfilm is generally in the 30% range, parchment-bound volumes used under those conditions will show noticeable signs of stress.

- Further complicating matters, the research that must be done to arrive at widespread agreement regarding environmental standards for various types of media and for collections of mixed media is incomplete. It is for this reason that the library community has struggled so long to create an American National Standards Institute Standard for storage of paper-based materials. Repeated questions have been raised about the validity of proposals, especially those for relative humidity. While in a laboratory environment a single piece of paper retains its flexibility longer in fairly dry conditions, these may be too dry for bound volumes, which depend upon adhesives for consolidation, and which must be able to sustain handling without damage. How dry is too dry?
- Experts also argue over whether cold storage enhances the life of video tape, and whether older preservation microfilm can withstand the low humidity recommended for storage of new film. Further study of the relationship between specific environmental conditions and the longevity of various types of library materials is required--a need that the preservation community has identified as a top priority.
- Finally, air quality has deteriorated across the centuries and particularly during recent times, making it ever more difficult to determine what pollutants exist locally, which are harmful to library materials, and how to filter them out of building environments.

Temperature and Relative Humidity

Because of the complexity of library collections and the consequent variation in their housing needs, the following discussion of environmental factors focuses on spaces in which general collections are housed. (For an overview of appropriate storage conditions for specific media, see the National Research Council publication ***Preservation of Historical Records***, cited in ***Appendix 1.2.***) Again, it is important to remember that to date there is no national environmental standard, and opinion within the conservation science community seems to be changing. Nonetheless, there is clear, ample evidence that heat and humidity have a marked accelerating effect on the natural processes that cause library materials to deteriorate, and that high humidity encourages mold growth. Guidelines for storage of paper-based materials in general collections typically recommend maintaining temperature as low as possible without creating discomfort for readers--advice about which there is widespread agreement. Much of the published literature on RH recommends a target goal of 45 or 50%. At the time of this writing, however, that figure seems to be dropping to 40%. Some researchers maintain that 30% is even better if it can be achieved, although further investigation is required to determine whether books sustain more damage when handled in air this dry.

There is certainty that fluctuations in temperature and relative humidity are extremely harmful to most materials. The article by Chandru Shahani cited in Appendix 1.2 includes a good discussion of this issue. In the ideal, temperature and relative humidity would remain absolutely constant 24 hours a day, but reasonable compromises must be made in real-life situations. Newer guidelines usually suggest maximum daily temperature fluctuations of no more than plus-or-minus 2 or 3 degrees, and daily fluctuations in humidity of no more than plus-or-minus 2 or 3 percent. There are also guidelines for monthly drift, referring to the maximum rate at which temperature and RH should be allowed to change from month to month to allow for seasonal climatic changes. (In New England, for example, it is extremely difficult and costly to achieve RH as low in summer as in winter, except in buildings with systems specially designed to maintain constant conditions. The drift from season to season, however, should take place slowly.) Environmental issues are locally dependent, and reasonable, affordable goals will need to take into consideration the age and nature of a building, severity of existing conditions, and the nature of the collections housed there.

Some important work is underway at the Library of Congress and the Image Permanence Institute in Rochester, New York, where experimentally-derived environmental data is being used to create models that will assist in setting environmental goals for new buildings and for building renovations. Information is plotted on charts or graphs that show, for a specific medium, how many years of shelf life are gained or lost when temperature and relative humidity are adjusted up or down. The article by Donald Sebera listed among the readings for Task Force A in *Appendix 1.2* presents examples of this kind of approach. Among the interesting things that Sebera's isoperm charts show is that the same shelf life for paper can be achieved under different conditions by lowering RH when temperature rises, and vice versa.

Sebera's groundbreaking models make clear that there are no pat answer to questions about ideal conditions. Temperature and humidity issues are complicated. Nonetheless, much can be learned from monitoring the environment in library buildings. Investigations should focus on whether extreme swings in temperature and/or relative humidity are taking place over the course of a day, week, month, or year; and whether conditions are deviating significantly from published recommendations.

Light

Both visible and invisible light have cumulative damaging effects on library materials, providing energy that promotes deteriorative chemical reactions, some of which become self-perpetuating even after the original energy source is withdrawn. In general, preservation goals involve limiting the amount of ultraviolet radiation in light to the greatest extent possible; limiting the intensity of light to the lowest levels required by humans to make appropriate, safe use of space; and limiting the amount of time that lights are turned on to the greatest extent possible. Many buildings, especially modern ones, are overlighted. Control of light is important both in stack areas, to prevent fading and cracking of bookbindings and the edges of text blocks; and in spaces such as processing areas and exhibit cases, where certain printing and writing inks, watercolors, and other media are vulnerable to very rapid fading.

Gary Thomson's discussion of light in ***The Museum Environment***, and William Lull's and Paul Banks's in ***Conservation Environment Guidelines for Libraries and Archives*** (see ***Appendix 1.2*** for citations) are invaluable sources for understanding lighting issues and goals. The number of footcandles of light required depends on how space is used. According to Lull and Banks, 30 to 60 footcandles are sufficient for reading, 5 to 15 are the maximum allowable for display of light-sensitive objects, and as little as 2 footcandles of vertical illumination is sufficient for reading book spines in stack areas (see p. 5 of ***Conservation Environment Guidelines...***). Limiting ultraviolet (UV) exposure to 75 microwatts per lumen (or 2-4% of total light) is generally recommended.

Air Quality

Air quality is a fourth major factor that determines whether a library building provides safe conditions for storage of collections. Potential contaminates include both particulate matter and certain gases, and the damage that can be done ranges from light soiling to greatly increased rates of deterioration. Both Thomson's and Lull's publications include good discussions of the topic. As with other aspects of preservation research, much has yet to be learned about the affects of various gases, which are most damaging to which types of materials, and how they might be filtered most efficiently from air. Furthermore, the measurement of air quality is not a job for lay people. Nonetheless, polluted buildings often provide adequate clues that signal the need for professional investigation. These include the presence of sooty residue around air ducts, on walls, ceilings, and other surfaces; and noticeable darkening of text blocks from the outside edges inward.

Support Structures

Shelves, cabinets, cases, book trucks, and other support structures should be designed for maximum protection of the materials stored in and on them. To be effective, they must be of appropriate size, manufactured of non-damaging materials, finished or coated properly, and conveniently located; and there should be enough of them to prevent over-crowding. As a general rule, book drops are antithetical to preservation goals. If they cannot be eliminated altogether, they should be designed or modified to minimize the distance materials fall, the impact of hitting bottom, and the effects on books already inside the drop when more are deposited. They should be emptied frequently and locked when the library is open. The section on "Storage and Handling" in the ***Preservation of Library & Archival Materials: A Manual***, published by the Northeast Document Conservation Center (NEDCC), presents a useful discussion of library furniture, and Sherry Byrne's ***Collection Maintenance and Improvement*** resource guide includes information on the housing of specific media (see ***Appendix 1.2*** for citations).

Cleanliness

Libraries should be cleaned on a regular schedule to eliminate sources of food and shelter for insects and vermin; and to ameliorate the effects of dust (which acts as a blanket to attract and hold moisture around the surface of materials) and coarser particulate matter, which can soil and abrade surfaces. The best way to avoid having to grapple with such decisions as whether to fumigate is to avoid problems in the first place. The section on "Storage and Handling" in NEDCC's ***Manual*** describes cleaning procedures and products.

Environmental Characteristics of Library Facilities

Every enclosed space presents a unique set of environmental factors, but a number of common characteristics are present in most libraries:

- Rooms are often large, but interior space is divided by furniture, partitions, cabinets, and shelves into many small units. Air circulation is therefore uneven, causing conditions to differ from area to area in a single space. These varying conditions are called microclimates. Large collections are commonly divided among separate buildings, on different floors, and in several rooms--each space presenting a new set of conditions.

- Patterns in a central stack will be unlike those in a combined storage/reading area. Conditions in closed cases or cabinets are likely to be quite different from those in air surrounding them. Materials stored against an outside wall may experience much greater fluctuations than those stored only a few feet away from the wall.

- Many older buildings have high ceilings in reading areas, but very low ceilings in core stacks. Each create special problems for environmental control, compounded by the fact that few older buildings are equipped with modern climate control systems.

- Newer buildings generally have climate control systems, but windows do not open. Lacking other control mechanisms, when the system fails (as it inevitably does) conditions may change drastically, lacking no other controlling mechanism. Modern buildings often incorporate vast walls of windows in their design, increasing the potential for damage from ultraviolet light and contributing to heat and humidity problems.

- Very humid seasons or climates bring outbreaks of mold and insect attack, while conditions in arid regions and in over-heated buildings with no humidity control produce desiccation and embrittlement. The physical mass of a large collection, and the hygroscopic nature of most record materials, affect the efficiency of control systems. As materials absorb and give off moisture to remain in equilibrium with the surrounding temperature and humidity, they tend to buffer the climate at their own expense, promoting falsely reassuring humidity readings. On the positive side, because of their mass, collections of books and papers tend to respond slowly to changes in relative humidity.

- Most libraries must rely on persons not on the library staff (usually university or local government employees) for the maintenance of library facilities, and even for acquiring basic information about those facilities (such as how to turn down the heat or shut off water in a leaking pipe).

An awareness and understanding of these characteristics is essential for an effective review of existing conditions, and for the planning process that will lead to environmental improvements.

Problems in Studying Environmental Conditions

As suggested by the foregoing, a major difficulty in assessing environmental conditions is the tremendous variation likely to exist within a single library or library system. The time and cost that would be involved in conducting a truly comprehensive survey make it impractical for any but the smallest collections. In the context of the *PPP*, the focus must be on sampling conditions in representative areas. Though such an approach will miss some problems, it will usually identify major areas needing attention.

Another challenge is presented by the uniqueness of every building. Each has its own idiosyncrasies, many of which may not be immediately apparent. The *PPP* review process must therefore elicit the knowledge of those who have worked in a facility over a long period of time and are familiar with its spaces and quirks; and who know what alterations and renovations have taken place and when and how the building's systems tend to underperform or fail.

A third difficulty in studying building environments on a short-term project basis lies in the fact that conditions almost always vary from season to season (especially in cold climates) and from year to year, depending on variations in weather patterns, improvements or breakdowns in heating and cooling systems, changes in maintenance patterns in response to staff growth or decline, and redefinition of environmental goals (during energy crises, for example). Only a year-round monitoring program can provide comprehensive information about a site. The *PPP* study, however, is meant largely to stimulate commitment to a long-term monitoring program, and reports from staff who work in the areas being surveyed can supplement short-term monitoring to provide preliminary information for planning purposes.

A fourth problem is the need to select and acquire appropriate monitoring instruments, some of which are expensive. Thermometers are readily available, but measuring humidity and light requires more sophisticated equipment, as does continuous monitoring of temperature and humidity. (Evaluating air quality is so complex an undertaking that it is excluded from this study.) Since variations in conditions throughout each day and season are of great significance in situations where continuous-recording instruments cannot be acquired, measurements should be made as frequently as possible over an extended period.

Finally, once it appears that a problem has been identified, it typically takes expert analysis to verify findings, determine the source of the problem (which is often complex and systemic), and engineer a strategy for improving or correcting it. In addition, it takes time and energy to secure funding to follow through on recommendations.

Assumptions Underlying the Environmental Investigation

Several assumptions shape the investigation and should influence the analysis and recommendations for improvement.

- The task force can conduct a preliminary investigation, but this will be incomplete and inconclusive, and should lead to an ongoing monitoring program.

- Conditions will vary from one area to another.

- While major changes in facilities are not likely to be immediately feasible, some minor changes may result in major improvements.

- Goals and priorities for improvements in various areas must be related to the current condition of the materials in those areas, their intrinsic value, and their relationship to the total collection.

Upgrading the environmental conditions is likely to be a long and costly process. Task Force A must recognize the physical and economic constraints inherent in the situation, and focus on developing a broad base of factual data that will alert the library administration and officials of the parent organization to the scope of the problem, inform them about the probable consequences of inaction, and outline a series of short and long-term measures for further investigation and action.

Organizing the Investigation of Environmental Conditions

Task Force A is generally chaired by a member of the study team, and includes four to seven people, depending on the extent of the facilities and the scope of the investigation. The group should include, or have access to, persons with a broad knowledge of the facilities, and familiarity with the institution's maintenance and engineering procedures and personnel. Appointment of an officer from the facilities department of the parent organization as a consultant to or member of the task force will be invaluable, if this can be arranged.

Upon appointment, members of the task force should begin to read the study team's background paper, ***Chapters 1-5*** of the ***PPP Manual, Preservation Program Models***, and the additional readings suggested in ***Appendix 1.2*** for Task Force A. Up to twelve weeks may be allotted for conducting the investigation and preparing a report. The study team establishes the deadline, and the task force is responsible for setting its own schedule to accomplish the work within that period. The consultant may meet with the task force to review the basic principles of environmental surveying and data analysis, and to help develop an action plan for the investigation. The obligation to read background materials is particularly weighty for the environmental study group. In order to begin the slow process of learning about a building, and arguing for professional analysis and major capital expenditures if these are required, the task force must understand environmental issues well and articulate them correctly.

Steps in the Investigation

Before setting forth with clipboards and instruments, the task force should prepare an inventory of the library's facilities as the basis for selecting the locations that will be examined. The inventory should focus on areas devoted largely to the housing of library collections, excluding processing, service, and administrative spaces.

The inventory should list all library buildings; the approximate size of spaces devoted to collections; and general characteristics of heating, ventilating, and air conditioning (HVAC) systems. It is likely that this information will be available either through the library's administrative office or from the facilities department of the parent organization. The task force begins its work by deciding what information is needed to compile the inventory and how it might be gathered, and assigning individuals or subgroups to collect and compile data.

Selecting Spaces for Examination

From the completed inventory the task force selects several locations for in-depth examination. The sample should:

- yield information that suggests the variety of problems that exist throughout the system,
- include spaces housing materials of great artifactual value as well general collections,
- include spaces in new as well as older buildings, with and without climate control systems,
- include public and restricted areas, and
- be representative of other spaces in the system.

The actual number of locations to be examined in depth will depend upon the variety of types of spaces identified in the inventory, and upon the time and staff available for conducting the review. A superficial survey of additional spaces will provide valuable information to augment the in-depth examinations, and can strengthen an argument for broadening the survey and monitoring program over time.

Before making the final selection, Task Force A should meet with the task force that is assessing the physical condition of the collections. There are advantages to selecting some of the same areas for study, since complementary data may help to document the relationship between environmental conditions and the deterioration of different types of materials. Coordination with the task force on disaster preparedness will also be useful, since that group has a corollary interest in the facilities.

Examination of Sample Environments

The task force next decides upon the specific methods to be used in examining each area, sets a schedule, and assigns individuals or subgroups to conduct each examination. The data gathering will concentrate on assembling basic facts about temperature and humidity patterns, light levels, cleanliness, physical structures (shelves, cabinets, book drops), and obvious signs of building problems (e.g., stains on ceilings and walls).

Before beginning the examinations, the task force should communicate with staff responsible for each of the locations to be surveyed, to explain the purpose and scope of the review and ask for assistance in scheduling activities. Background information about the relationship between the environment and the longevity of collections should be provided to staff, and activities arranged to ensure minimal inconvenience.

The data gathering begins with a visual inspection of each location, during which basic information is recorded. (An inspection checklist appears in ***Appendix 5.2***. Also see NEDCC's Technical Leaflet "What an Institution Can do to Survey Its Own Preservation Needs" in Sherry Byrne's ***Collection Maintenance and Improvement*** resource guide (pp. 63-99). Staff members who work with the collections in the area being surveyed may be involved in this initial inspection.

Next, a plan is developed for monitoring temperature, humidity, and light levels over the course of several weeks. The length of the monitoring period will depend upon the nature and number of instruments that are available to take readings, how many sites will be surveyed in-depth, and the total time allotted by the study team for the task force to conduct its work. Locations for taking instrument readings should be selected to provide, as nearly as possible, representative data about the whole space being monitored, and any special areas within it.

Monitoring Equipment
For good discussions of environmental monitoring equipment, see the Technical Leaflet "Monitoring Temperature and Relative Humidity" in NEDCC's *Manual*. In summary:

- **Manual Recording of Temperature and Relative Humidity**
  Reliable mercury or bi-metallic strip thermometers can be purchased at a hardware store. They are inexpensive and can be bought in quantity. While inexpensive hygrometers are also available in hardware stores, instruments that read humidity tend to drift. Household equipment is unreliable. Any dial hygrometer that is purchased must be able to be recalibrated (that is, the reading must be adjustable). Readings are verified using a sling psychrometer or a battery-operated motor-blower psychrometer. Electronic instruments are also available at slightly higher cost. Sling psychrometers are less expensive, but are difficult to use effectively. Dial hygrometers should be checked against a psychrometer reading at least once a week, and recalibrated if necessary. The minimum equipment required, then, for manual monitoring, is: 1 high quality thermometer and 1 calibratable dial hygrometer for each site to be surveyed; and 1 battery-operated psychrometer for the project. See ***Appendix 5.3*** for a sample of data collected by spot checking, and a chart displaying that data.

- **Continuous Recording of Temperature and Relative Humidity Using A Hygrothermograph**
  Hygrothermographs are instruments that record temperature and humidity constantly, on a chart. They provide far more information than is gathered through manual spot checking, showing exactly what is happening at a given site 24 hours a day. Each time a chart is changed, temperature and humidity readings should be recalibrated. Temperature can be checked against a good thermometer (which should be kept on the shelf with the hygrothermograph so that it provides accurate readings at the site); humidity should be checked against a battery-operated psychrometer. The minimum equipment required for

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monitoring with a hygrothermograph, then, is: 1 hygrothermograph and 1 high quality thermometer for each site to be surveyed; and 1 battery-operated psychrometer for the project. See *Appendix 5.3* for a sample display of data recorded on a hygrothermograph operated for 1 year in a music library. Weekly high and low temperature and relative humidity readings have been plotted over time to show short- and long-term fluctuations in the building environment.

- **Continuous Recording of Temperature and Relative Humidity Using A Datalogger**
  Dataloggers are small devices that sense temperature and relative humidity electronically, and record readings on a computer chip at regular intervals, 24 hours a day. Periodically the datalogger is connected to a personal computer, and data is printed out in chart form using software designed specifically for this purpose. No regular calibration is required, although humidity sensors must be replaced periodically. Dataloggers require virtually no maintenance (where hygrothermographs do, on a regular basis), but do require basic computer literacy. The minimum equipment required for monitoring with a datalogger is 1 instrument for each site to be surveyed; and a single copy of the software to print out data. See *Appendix 5.3* for two sample displays of data recorded by datalogger. One plots readings taken at a single site over a four week period; the other, readings taken at four different sites over a two-week period.

While it probably won't have been possible to purchase a hygrothermograph or datalogger for every library building on campus, or every floor of the main building, whatever equipment is acquired for the task force investigation will be a beginning point for collecting an adequate number of instruments over subsequent years. It is likely that more than one method of collecting data will be used during the study. A library that owns a hygrothermograph on site, purchases a new datalogger for *PPP* purposes, and wants to do an in-depth study at 5 sites, will gather data in 3 different ways--with the hygrothermograph at one site, the datalogger at another, and manually at the remaining sites. For sources of equipment see the Technical Leaflet "Monitoring Temperature and Relative Humidity," in NEDCC's *Manual*.

- **Instruments for Monitoring Light**
  According to Lull and Banks, light meters that provide accurate readings in the 5 to 250 footcandle range are useful for spot checking lighting levels (see p. 12 of *Conservation Environment Guidelines...*). The sources listed in the Technical Leaflet "Monitoring Temperature and Relative Humidity" in NEDCC's *Manual* can supply instruments to measure light levels. The authors caution that accurate readings cannot be assured from the more affordable UV meters available. They suggest instead that light sources be identified, and UV output calculated by what is known about the lamps in use. See Lull's August 1992 article in *The Abbey Newsletter* (cited in *Appendix 1.2*) for more information about the ultraviolet output of many brands of fluorescent lamps currently manufactured.

Monitoring Procedures

Temperature and humidity monitoring procedures will vary depending on whether recording or non-recording instruments will be used. Where only non-recording instruments are available, the schedule should provide three to five readings a day to account for changes in outdoor temperature, movement of the sun, hours of use, and other factors. Agreement should be reached about who is responsible for taking the daily readings, and schedules should be coordinated among all locations being monitored to avoid conflicts in use of equipment. In some instances staff working in the area may be able to take readings; in others a task force member, student assistant, or volunteer may make rounds. Wherever possible, readings should be taken every day, regardless of whether the building is open, and in the late evening as well as morning and afternoon. The help of a security officer or maintenance supervisor might be enlisted for the few weeks that monitoring is underway.

Patterns of lighting levels can probably be discerned within a week, and need not be monitored longer unless the record is inconclusive or a strong relationship with temperature is suspected.

Each person who will be involved should be instructed in the proper use of equipment. Unless dataloggers are available, surveyors should know how to record information on a chart and plot it on a graph. All surveyors should know the location of all monitoring sites.

Throughout the period during which monitoring takes place, the task force chair or a designate should maintain a daily log of outside high and low temperature and humidity levels, and general weather conditions (sunny, cloudy, rainy). Weather service reports may be used for this purpose if the data given is reliable for the actual site of the library. An outdoor thermometer that displays high and low temperatures, positioned where the instrument is not affected by direct sun, can provide comparative (if not absolutely accurate) information about changes in weather. Outdoor readings may yield important information about the relationship between variations in internal and external climate.

The data should be reviewed half-way through the monitoring period, prior to interviewing appropriate members of the facilities staff. This interview should seek information about the nature and capabilities of the existing climate control systems affecting the area under study; maintenance schedules; the history of problems or improvements that have affected the area; and the possibilities, probable cost factors, and policies (such as a commitment to energy savings), that must be taken into account in developing general recommendations for improvements. The interview is also an opportunity to build on the existing relationship between facilities staff and the library. Ultimately, their environmental goals for the library must merge. Where building systems are involved, it is important to remember who is the engineer and who is the librarian. Listen, and when technical recommendations are made, acknowledge the need for expert investigation.

During the latter part of the monitoring period, the findings to date should be discussed with staff in the area being studied, to elicit additional information and insights into the nature of environmental problems and possibilities for solutions. Staff may be aware of seasonal variations in conditions and problems that may not be readily apparent. A cursory inspection should be made of materials in any areas where monitoring data suggests may have special problems, looking for evidence of damage that might have escaped notice during the initial inspection.

Analyzing the Environmental Data

At the conclusion of the monitoring period, all the data assembled about each location and about external weather conditions should be presented for discussion by the whole task force. Since much of the data-gathering and preliminary analysis will have been done by individual members or subgroups, all task force members should have an opportunity to review all data before the meeting. During the discussion, the following questions should be addressed:

- What patterns emerge from the review? Are there any big surprises?
- What spaces appear to have major problems? How serious are those problems in relation to the value of the collections housed there?
- What spaces appear to possess good environmental conditions? Do the causes for these good conditions suggest actions that might be taken in other areas?
- What short-term measures might alleviate some problems even before long-term solutions are feasible? (Shifting materials to more suitable quarters? Rearranging furniture, partitions, or lights? Removing some light bulbs or tubes? Installing or replacing filters on air ducts? Adjusting or recalibrating thermostats? Installing fans, dehumidifiers, or humidifiers? Sealing cracks and holes in foundations and walls? Cleaning?)
- What factors must be considered in evaluating potential solutions? (Age and overall condition of the building? The need to conserve energy? Remodeling or new construction plans?)
- What obstacles and incentives for improvement can be identified for each area? (For example, the cost of installing timer switches can be weighed against energy savings; the cost of achieving lower summer temperatures against lengthening the useful life of collections and improving staff morale.)
- Are there important spaces or environmental characteristics that could not be examined this time? How might they be investigated in the future?
- How might the monitoring experiences from this task force be used as the foundation for a perpetual monitoring program?

From this analysis, the task force should be able to produce a list of the major strengths and weaknesses in the library's environmental profile. Because the findings will probably cover a great number and variety of topics, the task force will have to find a middle ground between making sweeping generalizations and focusing on the minutiae of changing this light bulb or curtaining that window. This will be easier to achieve if emphasis is placed on establishing an ongoing monitoring process aimed at improving conditions, with facilities and library personnel responsible for conducting a collaborative periodic review of the information gathered, and working together towards solutions.

Developing Recommendations for Improving the Environment

The chief goal of Task Force A is to document the nature of existing environmental problems, and to suggest ways that these can be addressed or investigated further. As with all such tasks, choices and compromises must be made so that the final recommendations of the task force are plausible and achievable over time. Successful recommendations strike a balance between the ideal and what the library can realistically expect to accomplish. They should be organized into meaningful categories, and should include as many as possible of the following components:

- description of the problem,
- suggested action,
- desired outcome,
- responsibility for implementation,
- time frame for implementation, and
- general financial and/or staff resources required.

The ***PPP*** task force reports developed by other ARL libraries provide helpful models for framing recommendations.

Task force members should reflect on the following questions:

- What possible approaches might be taken to solve each of the major problems identified?

- What pros and cons would each potential solution entail (i.e., how would it affect collections, use patterns, human comfort, cost)?

- How do the potential solutions to each problem rank in terms of beneficial impact on the collections?

- How do they rank in terms of ease of implementation?

- Where does the role of the library stop, and that of building experts (architects, engineers, and others) start?

The report should document, at an appropriate level of specificity (be it very general) what would be required to achieve greatly improved environmental conditions, and suggest interim or compromise measures that take into account the constraints and limitations facing the library. Some of these will be physical, some economic. Some may be overcome in the short or long term, while others (the climate in the region, for example) will remain outside the control of the library.

Potential actions can be organized into categories--perhaps by environmental characteristic, or by building and should combine broad goals with specific objectives. Spelling out the relationships between the desired change and the methods for achieving it will aid in avoiding the presentation of massive shopping lists or vague restatements of principles. For example, rather than recommending that the library filter all windows and lights, and install timer switches and blinds, the recommendation might read:

The library should develop a phased approach to reducing overall light levels and providing protection from ultraviolet radiation for materials in the collections. In implementing such a program first priority should be given to the exhibition area and Rare Book Room in Special Collections, and to the History Reading Room. The following strategy seems most practical:

- Install timer switches on stack lights.
- Install blinds or drapes on south-facing windows.
- As fluorescent lamps fail, replace them with lamps that emit less UV radiation.
- Allocate funds each year for the purchase and installation of UV acrylic panels for fluorescent light fixtures.
- Install UV-shielding plastic on all windows in stack areas.
- Secure the services of a lighting engineer to verify Task Force findings that stack areas are over-lighted and to present a plan for effective, selective removal of bulbs.
- Etc.

Recommendations should also be accompanied by any information the task force has uncovered about cost figures, side benefits, and adverse consequences. For example, the supporting data might point out that using fewer bulbs will reduce electricity bills, that book bindings have faded and begun cracking on shelves receiving full afternoon sun, that X dollars per year for five years would purchase UV-filtering acrylic panels for all fluorescent light fixtures in a specified area.

Taken as a whole, the draft recommendations should summarize the task force's findings and judgments about priorities and approaches for making gradual and significant improvements in the quality of environmental control in library buildings.

Reporting to the Study Team

The task force report to the study team should follow any guidelines that were established by the team or set forth in the charge. It should include:

- a brief description of the task force methodology,
- a general description of the library's facilities,
- a discussion of the major findings and problem areas identified through the investigation, and
- a presentation of recommendations for improvement.

A sample outline for the report appears in ***Appendix 5.4***. It should be adapted as needed. The report might also incorporate, where appropriate, information on the probably consequences of various changes, reference to possible constraints, and comments on the risks involved in taking no action. The task force report is a working paper; its contents should be logically organized and clearly expressed, but its prose need not be highly polished. Final recommendations for change will be made by the study team after it has met with and analyzed the reports of all the task forces.

APPENDIX 5.1
SEQUENCE OF TASKS FOR THE ENVIRONMENTAL INVESTIGATION

Preparation

Acquire monitoring equipment
Read background paper prepared by study team, *Chapters 1-5* of the ***PPP Manual, Preservation Program Models***, and the readings for Task Force A listed in ***Appendix 1.2***.
Plan activities and assign initial tasks

Produce inventory of spaces

Identify information needed and probable sources
Assign individuals and subgroups to collect it
Assemble information and prepare inventory

Select spaces to be examined

Determine number of places to be examined
Consult with condition and disaster task forces
Select locations from inventory
Notify appropriate staff

Examine representative spaces

Set schedule, make assignments
Conduct visual inspections
Establish monitoring plan
Carry out monitoring
    Begin climate record
    Take daily instrument readings
    Review data and meet with building engineers
    Discuss findings with staff who work at the location
Assemble all data

Task force analysis of data

All members study data
Discuss major trends and specific problems
Determine major goals for improvement

Develop recommendations

Brainstorm potential solutions to problems
Analyze and rank solutions
Draft recommendations

Prepare report to study team

Outline contents and assign drafting responsibilities
Review and revise sections as completed
Complete report and submit to study team
Prepare presentation for joint meeting of the study team and task forces

APPENDIX 5.2
CHECKLIST FOR ENVIRONMENTAL EXAMINATION

This information is gathered through visual inspection and interviewing of library and facilities staff; and is supplemented by monitoring temperature, relative humidity and light levels using appropriate instruments.

Identification of space

Building name, location, approximate square feet, nature and number of materials held, level of use

Heating, ventilating and air conditioning system

Type? Apparent effectiveness? Age? Documented and/or observed problems? Signs of soot around air ducts and on surfaces? Have hygrothermograph readings been taken in the past and are they available? Are other records available documenting the performance of the system? Do conditions vary seasonally?

Heat sources

Close proximity of windows, radiators, heating pipes or incandescent lights, to collections? Evidence of warping, splitting, cracking bookbindings?

Humidity/moisture

Presence of humidification or dehumidification equipment? Close proximity of water pipes, forced-air vents, to collections? Signs of previous leaks, degrading walls or ceilings? Evidence of mold, mildew, or condensation? Signs of desiccation? Have readings been taken in the past and are they available?

Light

Close proximity of windows or light fixtures to collections? Fluorescent lights filtered to eliminate ultraviolet radiation? Evidence of fading, discoloration, or cracking of bookbindings?

Housekeeping

Dust, grit, or carbonaceous particulate matter on collections or shelves? (Carbon turns white cotton gloves black.) Evidence of insects? Vermin? How often is the area cleaned? What, exactly, is cleaned? Floors, shelves, books?

Support structures

Shelving--Sturdy? Properly braced? Shelves deep and high enough for materials? If wood, properly sealed? If metal, properly finished? Free from rust, splinters or sharp edges? Sufficient number of step stools for safe access to high shelves? Adequate number of book ends? Evidence of overcrowding? Adequate aisle space for trucks?

Cabinets--Drawers or shelves appropriate for size of materials? If wood, properly sealed? If metal, properly finished? Free from rust, splinters or sharp edges? Smooth, easy opening? Convenient for careful removal and replacement of materials? Evidence of overcrowding? Materials properly supported?

Folders, boxes--Of appropriate size for the materials they contain? Provide adequate support? In good condition? Manufactured from appropriate materials? (Darkening and embrittlement of either folders or their contents suggests the presence of acid. A pH indicator pen, available from library sales catalogs that carry "archival" supplies," can be used to conduct a simple assessment of pH.)

Exhibit cases--Sturdy? Smooth surfaces? Illumination controlled for ultraviolet radiation, intensity, and duration? Effective mechanism for controlling internal temperature and relative humidity? Adequate, well-designed display stands or racks available?

Book returns--Mechanism for minimizing the distance that books fall into bins? Cushioned collecting area? Emptied frequently? Locked when library is open? Are they necessary?

Book trucks--Sturdy and smooth rolling? Wide enough for materials? If wood, properly sealed? If metal, properly finished? Free of rust, splinters or sharp edges? Sufficient number for careful handling without overloading?

Work surfaces & reading tables--Adequate size for examining materials? If wood, properly sealed? If metal, properly finished? Free of rust, splinters, or sharp edges? Location and arrangement convenient for careful handling of collections?

Viewing or listening equipment

Clean? Good working condition? Adequate maintenance schedule? Evidence of damage to materials (scratched records or film, degraded video images)?

Arrangement of space

Layout appropriate for safe transport of collections through aisles and doors, around corners, into elevators? Does layout allow for adequate air circulation? Any problems created by the nature of adjoining space, use patterns?

APPENDIX 5.3
ENVIRONMENTAL DATA COLLECTION

SAMPLE FORM FOR MANUAL COLLECTION OF DATA

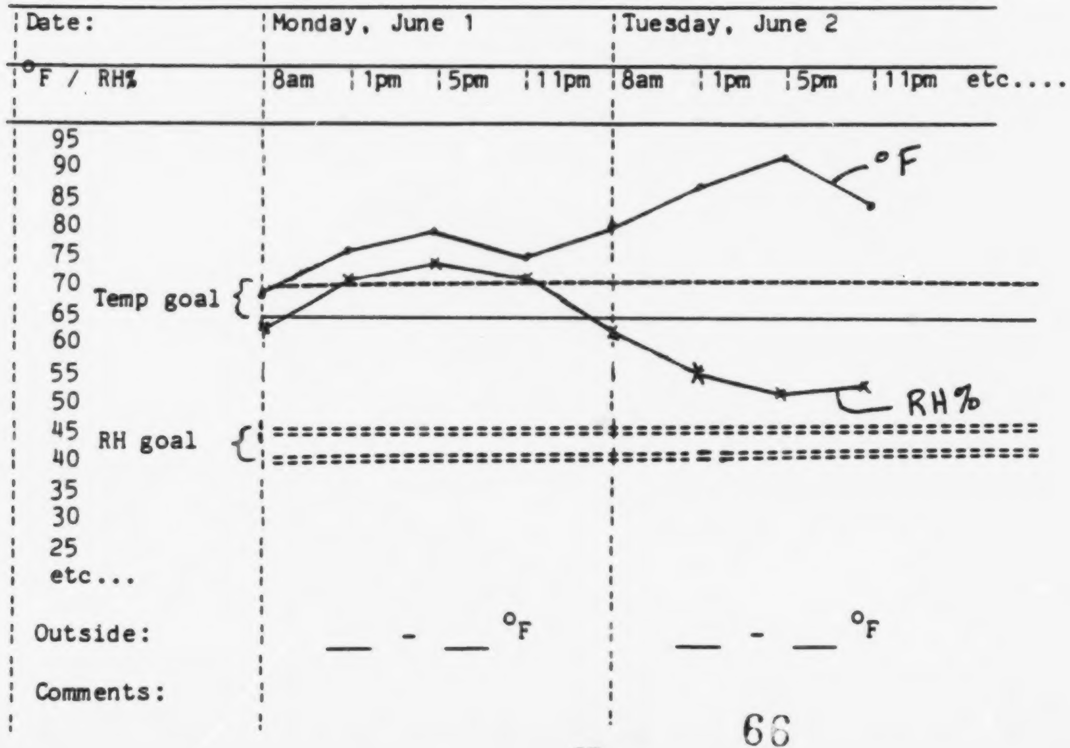
TEMPERATURE/RELATIVE HUMIDITY READINGS

Date:	Monday, June 1				Tuesday, June 2				
Weather:	Temp High 78° Low 66° cloudy, showers				Temp High 93° Low 74° sunny				
Location	8am	1pm	5pm	11pm	8am	1pm	5pm	11pm	etc....
A	64° / 62%	74° / 70%	77° / 72%	73° / 66%	78° / 61%	86° / 55%	90° / 52%	81° / 54%	
B									
C									
D									

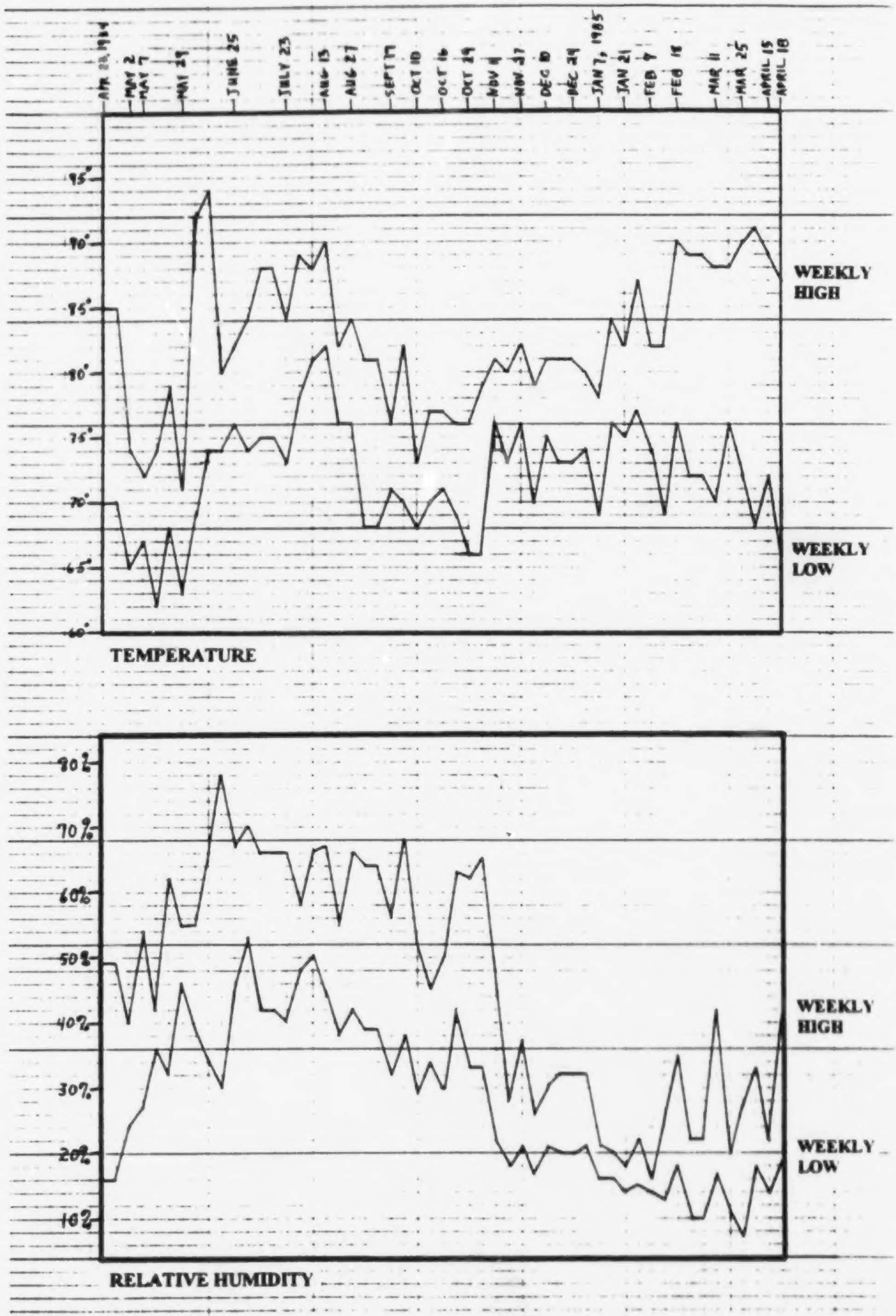
etc...

SAMPLE DATA DISPLAY CHART FROM DATA TAKEN MANUALLY
(Plotted on Graph Paper)

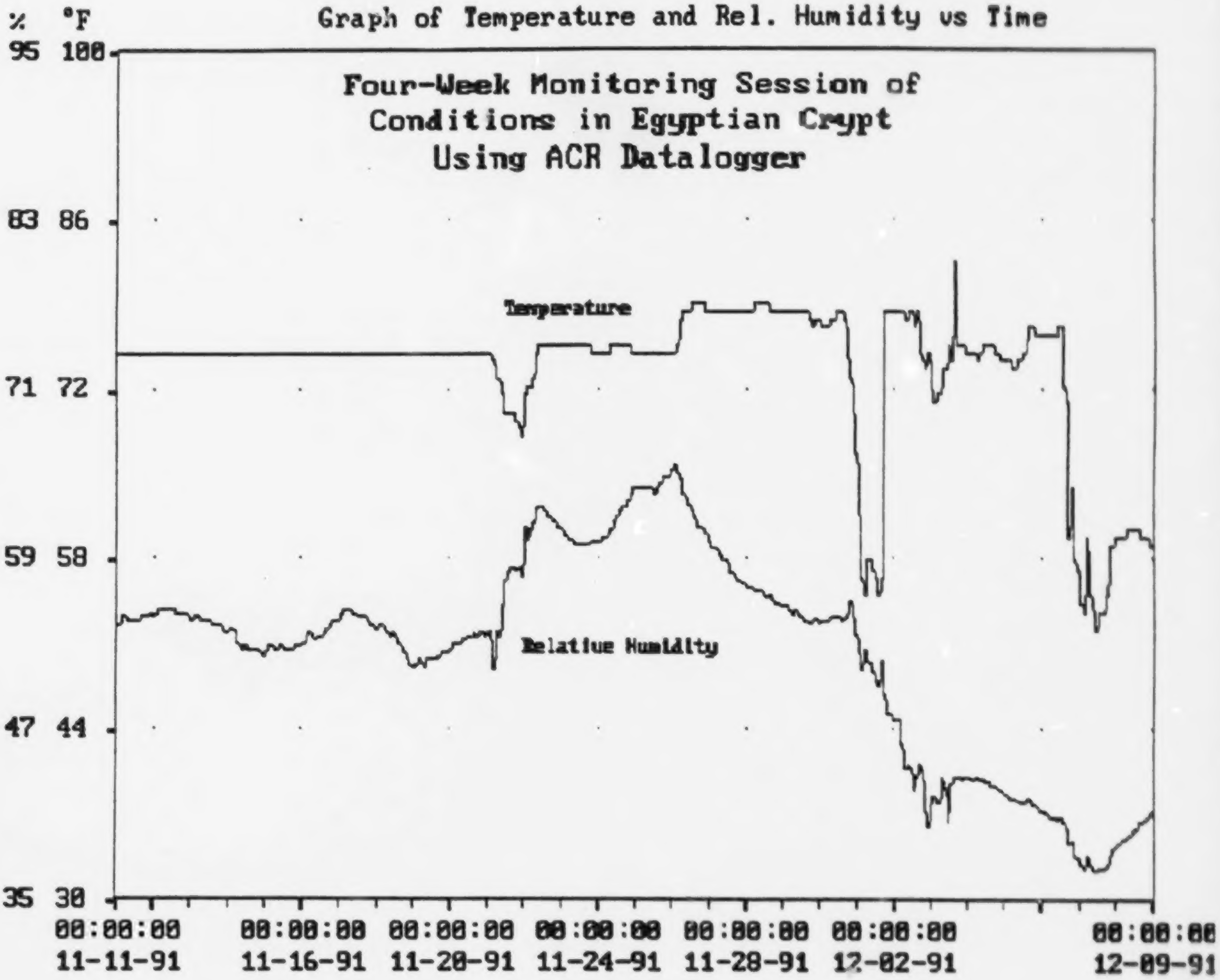
LOCATION:



SAMPLE DISPLAY OF DATA RECORDED ON A HYGROTHERMOGRAPH AT A SINGLE SITE OVER A ONE-YEAR PERIOD

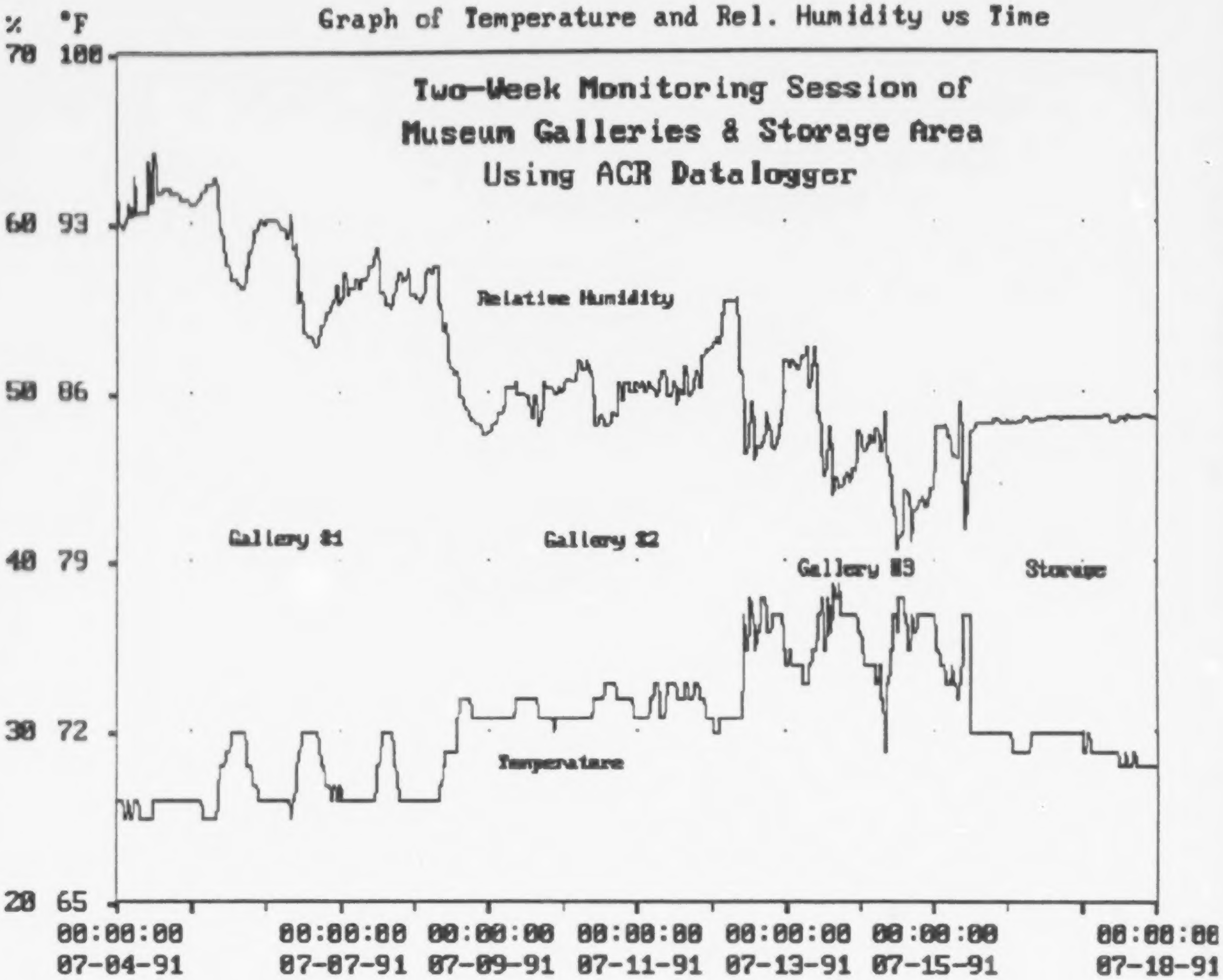


SAMPLE DISPLAY OF DATA RECORDED ON A DATALOGGER AT A SINGLE SITE OVER A FOUR-WEEK PERIOD



Continuous datalogging of temperature and relative humidity from November 11, 1991 to December 9, 1991.

SAMPLE DISPLAY OF DATA RECORDED ON A DATALOGGER AT FOUR SITES OVER A TWO-WEEK PERIOD



Monitoring of four separate sites:
Gallery #1, July 4-7, 1991
Gallery #2, July 7-12, 1991
Gallery #3, July 12-15, 1991
Storage Area, July 15-18, 1991

APPENDIX 5.4
SAMPLE OUTLINE FOR ENVIRONMENTAL TASK FORCE REPORT

Introduction

Scope of the study
Description of methodology
Strengths, limitations, or special features of the approach

Brief description of facilities

Main library
Special collections spaces
...etc.

Review of environmental conditions

Major problems
Apparent causes
Impact on the collections
Recommendations for additional investigation and change

Appendices

Sample and summary data gathered through monitoring
Floor plans identifying major environmental factors
Cost figures for equipment, supplies or structural modifications, where appropriate

CHAPTER SIX
PHASE II: PHYSICAL CONDITION OF THE COLLECTIONS
[Task Force B]

Introduction to Issues

Development of reliable data about the condition of the library's collections is an indispensable component of preservation planning. Because of the wide range in such factors as the age of individual items; the methods and materials used in their manufacture; and the processing techniques, storage environment, and use to which they have been subjected; most collections will contain materials in every condition ranging from pristine to completely disintegrated. Particular problems may cluster by location or format, but the traditional organization of materials into subject collections and internally-expanding classification sequences tends to distribute physical problems randomly throughout the system.

Among the major challenges inherent in evaluating the condition of research collections are the number and variety of items involved, and the wide range of physical problems represented. Modern libraries contain materials in an ever-wider array of formats. There may be hundreds of thousands--even millions--of items in some format groups, and within each group there are likely to be substantial differences in the chemical constituents and physical structure of individual items. Since an examination of every item is quite impossible, sampling techniques must be employed as a basis for estimating total preservation needs.

Another difficulty arises from the fact that certain physical characteristics must be determined through relatively sophisticated means. While brittle paper, for example, can be identified by folding a corner back and forth until it breaks, the acid content that leads to embrittlement must be measured using a chemical indicator solution, pH test strips, or--for more accurate readings--laboratory instruments. The newer information-carrying media are even more problematic inasmuch as their use is often machine-dependent. Some types of damage to magnetic tape, for example, can be discovered only by using special equipment made for that purpose. Although brittle paper is correctly identified as the most significant preservation problem in large research collections, because paper-based materials make up so high a percentage of total holdings, other media (compact disks, for example) are even more short-lived, and provide little warning that they are becoming unreadable.

Finally, individual items are likely to have multiple problems, thus necessitating a complex survey design. A book may be oversewn into the text, and have 50 pages intentionally removed. A vinyl disk may be scratched, have accumulated dirt in its grooves, and be stored in a crumbling cardboard jacket. The complexity of collections and their problems has time, skill, and equipment implications for the surveyor, and may therefore limit the scope of an investigation.

Assumptions Underlying an Investigation of the Condition of the Library's Collections

The following assumptions shape and motivate an investigation of the condition of the library's collections:

- Development of reliable information about the physical condition of a library collection is possible. Regardless of how information is gathered, however, survey questions must be designed so that to the greatest extent possible, answers are of an objective, rather than subjective, nature; and survey results must be quantifiable.

- Data gathered by inspecting a small percentage of items in a collection can be used to project the approximate number of items in the entire collection that fall into each major condition category (e.g., the number of volumes with inappropriately repaired bindings)--but only if the total population is sampled correctly.

- Survey results provide a solid, credible foundation upon which to base short- and long-term planning and to prepare program budgets.

Introduction to Survey Methodologies

In recent years, the physical characteristics of library collections have been studied in different ways to inform preservation planning efforts:

> *Expert Judgment*
> Observations made by a preservation expert based on a non-random sample of materials in the collection (e.g., the library invites a consultant to conduct a site visit and prepare recommendations based on observations).
>
> *Needs Assessment*
> A general assessment of preservation needs and priorities, arrived at by drawing a random sample from the collection and assessing each item in the sample to determine its condition, the type and amount of use it receives, the conditions under which it is housed, and its value.
>
> *Condition Surveys*
> A detailed assessment of the physical nature and condition of a collection, arrived at by drawing a statistically valid random sample and recording, in detail, the physical nature and condition of each item in the sample.

Regarding expert judgment, data gathered through brief observation, however skilled, does not yield enough information to form the basis for long-term preservation planning for large collections. For that reason the following discussion focuses on needs assessment and condition surveys. Because of the inevitable time constraints inherent in the *PPP* process, and the cost and time involved in developing a survey instrument and software that supports it, the use of already-available software is recommended.

Needs Assessment Surveys

Needs assessment is the most recently developed among the three survey techniques cited here. In addition to limited condition data, needs assessment surveys gather information about potential access problems (e.g., levels of use, whether the item is on the shelf), housing (fire protection, environmental conditions within buildings, disaster preparedness), and value (rarity, importance to institutional programs, etc.) The interplay of these four factors is used to determine the extent to which each item is at risk, what general actions are required to preserve it, and what priority it is assigned. The assumption is made that the resources required to meet all preservation needs will be insufficient.

To date there are two general preservation needs assessment survey instruments available: the ***Research Libraries Group Preservation Needs Assessment Package***, or ***PreNAPP***, and the California State Library's ***Calipr***. Both instruments have been automated for the personal computer. RLG is currently developing a specialized needs assessment instrument for photographic collections, based on the same four-way matrix around which ***PreNAPP*** and ***Caliper*** are designed; and a consortium of New York State libraries has applied needs assessment instruments to collections of architectural documents.

Calipr and ***PreNAPP*** are based on the same set of survey questions. The difference between the instruments lies primarily in the management reports generated by each. ***PreNAPP*** provides one report on the overall needs of the collection in all formats (books, documents, films, tapes, etc.); and includes statistical tables on the precision of estimates, as well as cross tabulations among the several survey data elements.

Calipr provides separate management reports on each of the formats surveyed (e.g., books, microfilm), and on two subsets of each collection surveyed (i.e., high-use materials, and materials having high value). The reports by format make it possible to estimate the total cost of each preservation action required; and the reports by subset support estimations of the cost of preserving high-value and/or high-use materials, assuming that funds are inadequate to meet the needs of the whole collection.

Ordering information and system requirements for ***PreNAPP*** and ***Calipr*** are as follows:

PreNAPP		*Calipr*	
address:	Research Libraries Group Documentation Services Center 1200 Villa Avenue Mountain View, CA 94041-1100 e-mail: bl.lxa@rlg.stanford.edu	address:	California State Library Foundation P.O. Box 942837 Sacramento, CA 94237-0001
cost:	free to RLG members $21 + $5 shipping/handling for non-members	cost:	$30 + $2.50 shipping/handling
installation:	IBM-compatible PC (contact the Research Libraries Group for current system requirements)	installation:	IBM-compatible PC (contact the California State Library Foundation for current system requirements)

Condition Surveys

Condition surveys collect more detailed information about the physical condition of a collection, and defined subsets of a collection, without folding the element of risk (i.e., building conditions, disaster preparedness, use) into the survey design itself. In addition to general questions (e.g., "What percentage of the collection is in good condition?" "What percentage is damaged but can be repaired?" "What percentage has sustained intentional damage?") condition surveys can answer specific questions that help to project the operational needs of a preservation program. For example, in assessing a strong subject collection of international importance, one could project from the number of volumes that are acidic, not yet brittle, and printed on uncoated paper, the number of volumes in that collection that would be appropriate candidates for mass deacidification. In assessing a circulating undergraduate collection, a significant percentage of volumes that show signs of having had pages intentionally removed would suggest a need to review the per/page cost of photocopying in the library, and the number and location of copy machines.

A number of research libraries have conducted condition surveys in conjunction with preservation planning efforts, beginning with the pioneering survey undertaken by the Stanford University Library in 1979. The most comprehensive survey conducted to date was undertaken at Yale University from 1979 to 1983 with support from the National Endowment for the Humanities. This large-scale study assessed the physical nature and condition of books in a 36,500-volume random sample, drawn from 15 of Yale's 16 major libraries. The collections were divided into 36 discrete subsets, each of which was treated as a separate collection. For each book, surveyors answered 12 questions about its physical nature and condition.

Recently, a condition survey methodology has been developed and field tested extensively by the Harvard University Library Preservation Office for use in its decentralized system of research libraries.

The Harvard University Preservation Office Condition Survey Methodology

The development of a condition survey methodology for the Harvard University Library is part of a long-range program to collect information about the condition of Harvard's collections, which will serve as a basis for preservation planning, project planning, and fund raising. When the Preservation Office began work on a survey process for the general research collections, it became apparent that several different types of computer software would be required to conduct a successful condition survey from beginning to end. A spreadsheet program was needed to generate random samples and provide statistical analysis, a database program was needed to collect data, and a graphics program was needed to produce survey forms and the graphs to be used in final reports. It was clear that computerized information gathering and reporting tools should not be recreated for each of the Harvard libraries surveyed.

With the goal of creating an efficient, reliable survey process, the Preservation Office began to investigate ways to streamline and automate survey procedures at the same time that field testing began to assess the quality of data gathered using a preliminary survey design. The result of this effort is a custom-designed and programmed condition survey package that provides a complete set of survey tools for general research collections. The survey package enables Harvard's libraries to conduct surveys efficiently and relatively painlessly, and to share the results throughout the library system--a process that will facilitate development of preservation plans for individual libraries, as well as crucial system-wide planning.

The Harvard condition survey methodology contains two integrated modules: one to generate lists of random samples and a second to collect survey results into a database for tabulation and analysis. Both pieces of software have been carefully programmed to make them easy to use, even for people new to the Macintosh system on which it runs and who have no experience conducting condition surveys.

The database module has several unique features:

1. *Flexibility*. The Harvard software allows users to customize survey questions to reflect the subject areas and publication patterns represented in their collections. Once the library has entered its custom survey variables, these values are incorporated throughout the entire database, from survey forms to final reports and graphs, to ensure accurate and meaningful results. In addition, terminology and options within the survey form (e.g., types of bindings, types of protective enclosures, nature of damage done by patrons, nature of environmental damage) can be customized to reflect local circumstances.

2. *Survey options*. In addition to the basic condition assessment, a library can choose to gather data about the number and types of illustrations in each surveyed volume, and/or to add a "collections evaluation" component to the survey. When combined with condition data, use of one or both of these optional modules provides more comprehensive analysis on which to predict reformatting and treatment needs.

3. *Ease of use*. The Macintosh interface guides users easily through the process of setting up a survey and entering data. Little training is required to use the program.

4. *Quality control*. The database module has automated routines to check the data as it is entered into the database. While it does not eliminate the need to proofread survey data, the software will detect many common data entry errors and prompt the user to correct them during the data entry process.

5. *Quality of reports*. The Harvard software automatically produces analyses of data once it has been entered into the computer. Reports and graphs can be generated on the survey sample as a whole, or broken down by subject area, collection, place of publication, or by age of materials. The program allows for quick analysis of the statistical validity of the data, and in addition to the ready-made report formats there are also tools to produce custom reports.

Ordering information is as follows:

address: Harvard University Library Preservation Office
25 Mt. Auburn Street
Cambridge, MA 02138

installation: Macintosh (contact the Harvard University Library Preservation Office for current system requirements)

Organizing the Investigation

Select the Survey Task Force

The main responsibilities of Task Force B are to select a survey methodology, to carry out the survey, and on the basis of findings, to draft general recommendations for action based on the survey experience and problems revealed by data. These recommendations will be considered with those from the other task forces as the study team prepares its final report to the library director. Task Force B is generally chaired by a member of the study team, and includes four to seven people depending on the extent of the facilities and the scope of the investigation.

The group should include, or have access to, people with a broad knowledge of the collections; an understanding of the way various categories of materials are used; and familiarity with the library's past and present programs for repair, library binding, and other treatments. It is essential that at least one member of the task force be a person who is familiar with book materials and structures. Knowledge of statistical methods and sampling techniques will also be valuable, if only to answer questions that arise from use of one of the available survey packages. Statistics expertise can often be secured by engaging the consulting services of someone from another area within the parent organization (e.g., a statistics department or computing center).

Upon appointment, members of the task force should begin to read the study team's background paper, ***Chapters 1-4*** and ***6*** of the ***PPP Manual, Preservation Program Models***, and the additional readings suggested in ***Appendix 1.2*** for Task Force B. Up to twelve weeks may be allotted for conducting the investigation and preparing a report. The study team establishes the deadline, and the task force is responsible for setting its own schedule to accomplish the work within that period. The consultant may meet with the task force to review the basic principles of condition surveying and data analysis, and to help develop an action plan for the investigation.

Set Goals and Select a Survey Methodology

The task force begins its collaborative work by defining the goals of its investigation. These goals will focus largely on gathering specific, detailed information regarding the condition of the collection, studying the analyzed data to detect major trends and problems, and recommending action priorities based on survey findings. Next, a survey methodology is selected.

For purposes of the *PPP*, the Harvard survey is recommended for assessing the condition of general collections. First, it gathers more comprehensive data about the collections and offers more flexibility for analysis and reporting than do the needs assessment survey packages available to date. Where the needs assessment surveys ask 5 general questions about the nature and condition of each item, the Harvard survey asks 30 to 40, depending on whether the optional modules are selected (see ***Appendix 6.2***). This descriptive data is essential for making decisions at the operational level. Does the library binding program need to be overhauled? Are large numbers of materials being ruined by dampness in certain areas of the stacks? Does extensive mutilation suggest the need for a vigorous staff and user education program? Are the types of book and paper repairs currently employed resulting in damage to materials as they age? A well-designed condition survey can answer, or help to answer, these and like questions.

Second, issues such as environmental conditions, disaster preparedness, and staff and user education, which are factored into the needs assessment survey questionnaires, will be examined in considerable depth by Tasks Forces A, D, and F, and will therefore be key among the issues considered by the study team as it prepares its report.

Assessing the condition of non-book formats (photographs, magnetic tape, film, optical disks) is very challenging, partly because of the factors mentioned in the introduction to this chapter. ***Caliper*** and ***PreNAPP*** can be used to survey the general condition of materials in a variety of formats, but the questions asked about each item (e.g., "Has it become uncopyable?") require viewing, listening, or both, on appropriate equipment; and a good understanding of the mechanical, chemical, and aging properties of the medium.) It is probably best to ask questions that can be answered competently by a generalist (e.g., "Is the microfilm broken? Scratched? Properly secured on the reel and properly boxed?") Sherry Byrne's ***Collection Maintenance and Improvement*** resource guide, includes several readings and a bibliography that will be of use to libraries wishing to design surveys for non-book formats (see ***Appendix 1.2*** for full citation.) Because of the time constraints necessarily inherent in the ***PPP*** process, however, the task force should concentrate its efforts largely or exclusively on books and journals in the general collections in the main library. Task Force B can acknowledge the importance of developing descriptive data for all significant library holdings by recommending priorities for subsequent condition surveys.

Conducting the Investigation

Defining the Sample

The first step for the task force is to define the collection that will be sampled. Will the branch libraries be included? Should books in off-site storage or vertical file collections be surveyed? Once the scope of the survey population is defined, the task force will determine an appropriate sample size based on the principles described in Carl M. Drott 's "Random Sampling: A Tool for Library Research" (see ***Appendix 1.2*** for full citation). Although it seems counter-intuitive, the selection of sample size is not related to the size of the collection, but rather, to the confidence level and tolerance level desired in the results. Library surveys typically aim for a confidence level of 95%, which means that there is a 95% chance that the actual percentage of books in a specific category (e.g., books needing paper repair) will fall within the range determined by the survey data. Whether the collection is 50,000 or 3 million, the minimum sample required will be around 380 items. The results for this size sample will have a tolerance level (also called the confidence interval or standard error) of 5%. Thus a finding that 25% of the books are brittle actually means that there is a 95% certainty that 20-30% (25% ± 5%) of the collection is brittle.

If the library wants to make cost projections or predict the number of volumes needing repair, a lower tolerance level will produce more accurate estimates. In general, a sample of 600 will produce results with a tolerance level of 3-4%, while a sample of 900 will give 2-3%. The tolerance level is calculated by a statistical formula based on percentage and sample size, and is automatically computed as part of the Harvard program.

One of the common pitfalls in interpreting survey results is to generalize for small subsets within the survey population. For example, if folio volumes comprise 1% of the collection, a random sample of 900 drawn from the entire collection will include 9 folios--too small a sample from which to draw conclusions. Subsets of 50 will have a tolerance level as high as 14%. If the task force wants to look at the condition of subsets within the population (i.e., periodicals vs. monographs, American vs. European imprints), the subsets should contain at least 200 items, which will produce results with a tolerance level of around 6-7%. While still broad, these findings will indicate trends and problem areas that might be explored in more detail in future surveys. The alternative is to over-sample the segment of the collection that is under-represented, but this should be done with the advice of a statistician.

The Harvard survey methodology recommends a sample of 900-1000 items to produce more accurate results for the total collection and more reliable data for subsets within that collection. If this size sample is selected, the project will require an estimated 200 hours of staff time to survey and enter data. Additional time will be required to map the collection and proofread data; and to survey illustrations and/or evaluate the significance of items, if these options are chosen. Actual costs will vary depending upon whether the task force uses student workers or task force members, a decision that has considerable impact on the amount of training, supervision, and verification required.

Defining Survey Parameters

The initial definition of survey parameters is critical to the success of the condition survey, as is the definition of subsets within the collection for which discrete survey data are desired. A subset might be a broad subject area (e.g., physics), a language (e.g., German imprints), a collection type (e.g., all monographs), or a region of publication (e.g., Central America). Subsets should define sections of the collections where the task force expects to find significant differences in condition, or significant problems. A library might want, for example, to distinguish between the condition of paperback and hardbound volumes, or to contrast the condition of items published in the United States with those published in Asia. The number of allowable subsets is limited so that the final analysis will generate a sample large enough for meaningful results.

Regarding the two optional modules that are available within the Harvard survey: the illustrations component is used to gather data about the illustrative content of the collections. This information is helpful for assessing the possibilities and limitations of potential reformatting and mass deacidification programs. The collection evaluation component requires the involvement of a collection manager or subject specialist, who determines the artifactual value of each item and its relative significance in the collection. Using the collection evaluation component requires a greater investment of librarians' time, but it improves the predictive accuracy of treatment needs in the final analysis.

Once the survey parameters have been defined, the survey form is edited to prepare the software for data entry. The next step is to identify the specific items to be surveyed.

Mapping the Collection

The validity of the survey depends upon random sampling, which should provide an equal opportunity for each item in the collection to be selected. Since the Harvard model bases sampling on shelf location, the task force will need to map the library, identifying and numbering the ranges, bays, and shelves in which the volumes are housed. A floor plan showing the stack layout greatly facilitates the mapping process, but maps made from a plan should afterwards be checked in the stacks. (In particular, the number of shelves per bay can vary, and must be reflected accurately.) From this information, a program generates random numbers sorted by location. These lead surveyors to specific sites where items are to be sampled (e.g., range 22, bay 4, shelf 3, inch 19). A detailed manual discussing mapping, over-sampling, and predicting of sample size, accompanies the Harvard software.

Training Surveyors

Staff are assigned individually or as teams to conduct the survey. To complete a 900-sample survey in the allotted time, at least 4 surveyors will be required. A preliminary visit to the areas to be surveyed is made to gain a sense of the overall arrangement, within the context of the survey; and to review survey strategy with staff familiar with the materials. Work plans for carrying out the survey are thoroughly discussed within the task force, and necessary arrangements made. If people outside the task force will assist with data gathering, agreement must be reached on a variety of issues (e.g., scheduling); and computer support for tabulating results must be secured. Procedures for pulling materials and reshelving will need to be coordinated with circulation and stack maintenance staff.

Training materials should include instructions describing the sampling and survey processes. The manual accompanying Harvard software can be adapted to suit local needs. Surveyors will be trained by task force members, who thoroughly explain the survey categories and their applications. Surveyors are shown numerous examples of the types of materials and damage that can be expected to be found in the collection, questions are answered, and the group practices evaluating individual items. It is essential that adequate time be allocated for the training period to ensure that the surveyors are accurate and consistent in their interpretation and recording of data. A pilot survey of 90 items (to be included in the final survey) should be conducted to identify problems and inconsistencies early in the survey process. Group discussion of instances of misinterpretation and problematic recording can be very helpful.

Conducting the Survey

The survey itself involves two steps: pulling the sample, and evaluating the materials and recording data. Because they are more familiar with shelving arrangements, it may make sense for stack maintenance staff to pull volumes from the locations generated by the random sample program. Surveyors should work initially in teams of two to assist each other and discuss any issues that might arise. Since accuracy is a primary requirement, it is best to limit survey work to 2- to-3-hour periods. Systematic proofreading of all work should be done by a task force member during the first part of the project, followed by spot checks when the task force is confident in the abilities of the surveyors.

If the collections evaluation component is included, the survey will require a third step. Items will be set aside for review by collection managers or subject specialists, who will fill out the evaluation section of the form.

Entering Data Into a Computer

Survey information is recorded on pre-printed survey forms that are later used for data entry. If laptop computers are available data may be entered at the time of the survey, in which case a team of two surveyors is required--one to analyze the items, and a second to enter the data.

During data entry, one record is entered into the database for each item surveyed. The Harvard database program guides users through the data entry process by means of a series of on-screen instructions. A preliminary check of each record prevents the entry of incomplete or questionable records. A more sophisticated quality control routine can also be used at any time in the process to examine database records more thoroughly for possible inaccuracies in surveying and/or data entry. Even with these automated features, certain data entry errors will not be detectable by the database program. Thus it is essential that there be a proofreading system in place.

Analyzing and Organizing Data

Compiling and Interpreting Data

The results of the survey will appear first as compilations of data, showing the numbers of items that fall into each category, the percentage of the collection that these represent, and the tolerance level. An edited version of survey results appears in ***Appendix 6.3***, which describes the collections in an architecture library of 250,000 volumes. Note how the tolerance level varies according to the size of the sample and the percentage of the finding.

The Harvard survey methodology automatically produces reports resembling ***Appendix 6.3*** as part of the survey process. It also combines variables to quantify treatment needs. For example, repair is indicated for items with flexible paper and minor paper or binding damage; rebinding is indicated for items with flexible paper and major damage. Reformatting is indicated for items that are brittle; and those that have become unusable are distinguished from those that are usable (i.e., fragile but intact). If the collection evaluation component has been filled out, brittle items can be sorted into action categories pre-defined by the task force, (e.g., replacement with microfilm, replacement with hard copy, no treatment, boxing, discarding).

When studying survey results, the task force should identify areas that show significant differences between the subsets. Looking at ***Appendix 6.3***, we can see that the percentages for brittleness, acidity, environmental damage, and mutilation for monographs and periodicals vary by only 1 to 5 percentage points, which could be explained by variations in the tolerance level. In contrast, the condition of the external bindings of monographs and periodicals varies by 14%, which is significant. There are also significant differences in binding type (primary protection), covering material (joint covering), and leaf attachment. Such findings could provide the basis for recommendations for increased commercial rebinding of monographs. It is the job of the task force to look for similar relationships.

After reviewing it thoroughly, members of the task force should meet to discuss the survey data. The following questions should be addressed:

- What patterns emerge from the review? Are there any big surprises? How do these findings compare with those reported by other libraries?
- What subsets of materials appear to have major problems? How serious are those problems in relation to use patterns or the value of the materials?
- What subsets of materials appear to be in good physical condition? Do the apparent causes for this suggest actions that might improve the condition of other materials?

- Does the task force feel confident that the condition of the collection examined, and the subsets within that collection, is representative of the condition of similar collections and subsets? What reasonable projections might be made about library holdings as a whole?

- What short-term measures might alleviate certain problems, before long-term solutions are feasible? (Shelving oversize materials on their spines, rather than fore edges? Restricting access to very fragile items? Using better quality processing supplies? Reducing the use of a particular style of library binding? Adding a microform backup or replacement for certain serial titles?)

- What factors must be considered in evaluating potential short and long range solutions to problems? (The availability of treatment alternatives? The need to prepare decision-making criteria and procedures? Presence or lack of various types of expertise?)

- What obstacles to and incentives for problem resolution can be identified?

- Were the survey and examination methods effective? Are they adaptable for monitoring the condition of collections on a continuing basis?

- Are there important collections or condition characteristics that could not be examined at this time, and how might they be investigated in the future?

Following this analysis, the task force develops a general description of the condition of the collection, ranking major problems and noting any subsets that are significantly different from the overall population. At least two factors affect the establishment of priorities: the number of items exhibiting a particular problem; and their importance to the collection based on subject content, user demand, rarity, and/or other factors. Information about the importance of the collection will come from general and specific knowledge held by task force members, background information gathered by the task force in the process of defining survey categories, and collection evaluation data (if that component of the survey has been implemented).

The report should focus on major trends and leave detailed findings to charts in an appendix. Graphs are often effective for making a point in the narrative, e.g., line graphs showing the age of the collection or the percentage of embrittlement by decade. When extrapolating percentages to numbers of volumes or costs in dollars, it is important to remember that a random sample produces an indication of a range and not a specific number (as does an item-by-item survey). Projections should therefore be expressed in round numbers ("Twenty-five percent, or 65,700 volumes, are brittle"--not "65,731 volumes.")

Developing Recommendations and Reporting to the Study Team

The report of Task Force B to the study team should follow any guidelines that were established by the team or set forth in the charge. The chief goal is to document the problems affecting the collections. In its report, the task force first discusses the scope of the study; how it was conducted; and the strengths, limitations, and special features of the approach.

Next, it discusses survey findings based on the data gathered. This section is the main component of the report. Finally, it makes recommendations based on findings. Because detailed recommendations will be developed by other task forces, short- and long-range problem resolution should be dealt with in broad terms. This third section of the report should also include recommendations for extending the survey to other collections.

Task force members should reflect on the following questions:

- What general steps might be taken to solve each of the major problems identified?
- What are the pros and cons of implementing each solution?
- How do the potential solutions to each problem rank in terms of beneficial impact on the collections?
- How do they rank in terms of ease of implementation?
- What are the cost implications, in broad terms?

Successful recommendations strike a balance between the ideal and what the library can realistically expect to accomplish. They should be organized into meaningful categories, and should include as many as possible of the following components:

- description of the problem,
- suggested action,
- desired outcome,
- responsibility for implementation,
- time frame for implementation, and
- general financial and/or staff resources required.

The *PPP* task force reports developed by other ARL libraries provide helpful models for framing recommendations.

The sample report outline that appears in *Appendix 6.4* can be adapted as appropriate to suit local objectives. The task force report is a working paper. Its contents should be logically organized and clearly expressed, but its prose need not be highly polished. Its main purpose is to inform the study team, which will integrate the findings of all task forces and make final recommendations.

APPENDIX 6.1
SEQUENCE OF TASKS FOR THE CONDITION REVIEW

Preparation

Read background paper prepared by study team, ***Chapters 1-4*** and *6* of the *PPP Manual, Preservation Program Models,* and readings suggested in *Appendix 1.2* for Task Force B.
Order and become familiar with condition survey software
Plan activities and assign initial tasks
Create summary inventory of collections
Identify information needed, and probable sources
Assign individuals or teams to collect it
Assemble information

Select groups of materials for examination

Establish sample size
Map collections

Conduct survey

Set schedule, make assignments
Examine site
Train surveyors
Survey 90 items as a pilot
Evaluate the pilot survey
Assemble all data

Task force analysis of data

All members study data
Discuss major problems and trends
Determine major goals for improvement
Identify priorities for surveying other collections

Develop recommendations

Brainstorm objectives, i.e., potential solutions to major problems
Analyze and rank solutions
Draft recommendations

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Prepare report to study team

Outline contents and assign drafting responsibilities
Review and revise sections as completed
Complete report and submit to study team
Prepare presentation to joint meeting of study team and task forces

APPENDIX 6.2

HARVARD UNIVERSITY LIBRARY
PRESERVATION OFFICE
CONDITION SURVEY METHODOLOGY

SAMPLE SURVEY FORM

The boxes without text indicate fields that can be customized by the individual library. The fields with text are fixed.

Sample Condition Survey

1 **Sample no:** ☐

2 **Call no:** ☐

4 **Year:** ☐

3 **Weight:** ☐ lbs

5 **Pages:** ☐

6 **Size**
☐
☐
☐
☐

7 **Collection**
☐
☐
☐
☐

8 **Subject**
☐
☐
☐
☐
☐
☐ other

9 **Place of Publication**
☐
☐
☐
☐
☐
☐
☐ unknown

10 **Custom**
☐
☐
☐
☐
☐

11 **Enclosure**
☐
☐
☐
☐
☐
☐ none

12 **Appropriate?**
☐ appropriate
☐ inappropriate
☐ n/a

13 **Condition**
☐ no damage
☐ minor damage
☐ major damage
☐ n/a

14 **Binding**
☐
☐
☐
☐
☐
☐
☐
☐
☐ unbound

15 **If "pamphlet," is it ...**
☐ appropriate
☐ inappropriate
☐ n/a

16 **Binding repair**
☐ appropriate
☐ inappropriate
☐ n/a

17 **External binding condition**
☐ no damage
☐ minor damage
☐ major damage
☐ n/a

18 **Leaf Attach.**
☐
☐
☐
☐
☐
☐ none

19 **Leaf Attach cond.**
☐ no damage
☐ minor damage
☐ major damage
☐ n/a

20 **Text to cover**
☐ no damage
☐ minor damage
☐ major damage
☐ n/a

21 **Paper type**
☐ coated
☐ uncoated
☐ both
☐ unknown

22 **If "both," how much coated paper?**
☐ >1/4 in coated
☐ scattered
☐ n/a

23 **Paper repair**
☐ appropriate
☐ inappropriate
☐ n/a

Paper Condition

24 **Pages**
☐ no damage
☐ minor damage
☐ major damage

25 **Acidic (uncoated)**
☐ acidic
☐ not acidic
☐ not tested

26 **Brittleness**
☐ 1-2 folds
☐ 3-4 folds
☐ 4+ folds
☐ not tested

27 **If brittleness < 4 folds, are pages...**
☐ intact
☐ unusable
☐ n/a

28 **User damage**
☐ no damage
☐ minor damage
☐ major damage

29 **Type(s)****
☐
☐
☐
☐
☐ n/a

30 **Environ Damage**
☐ no damage
☐ minor damage
☐ major damage

31 **Type(s)****
☐
☐
☐
☐
☐ n/a

32 **Format Issues****
☐
☐
☐
☐
☐ n/a

33 **Color illus.**
☐ none
☐ some
☐ many
☐ most
☐ frontispiece
☐ ads

34 **Content****
☐ representative
☐ encoded
☐ adjacent
☐ grouped
☐ n/a

35 **Types****
☐ line illus
☐ cont. tone
☐ halftone
☐ original art
☐ n/a

36 **B&W illus.**
☐ none
☐ some
☐ many
☐ most
☐ frontispiece

37 **Content****
☐ adjacent
☐ grouped
☐ n/a

38 **Types****
☐ line illus
☐ cont. tone
☐ halftone
☐ original art
☐ n/a

39 **Artifactual value?**
☐ yes
☐ no

40 **Collection Evaluation**
If this book were unusable, what treatment would you recommend, based on its value to the collection?
☐
☐
☐
☐
☐ withdraw
☐ no treatment

Surveyor ☐

** = Question allows multiple responses. Choose ALL that apply.

APPENDIX 6.3

SAMPLE REPORT OF DATA

The following three pages show a method of presenting data from a condition survey in tabular form, along with statistical computations for standard error (S.E.) or tolerance level. The data is from a survey of book and periodical collections in an architecture library of 250,000 volumes.

Summary Statistics

	MONOGRAPHS		PERIODICALS		TOTALS	
Size of Sample (unless stated otherwise)	***643***		***303***		***946***	
	percent	S.E.	percent	S.E.	percent	S.E.
SIZE						
standard	95.4%	±1.6%	100.0%	±0.0%	96.8%	±1.1%
oversize	3.4%	±1.4%	0.0%	±0.0%	2.3%	±1.0%
folio	1.2%	±0.8%	0.0%	±0.0%	.9%	±.6%
PRIMARY PROTECTION						
pub binding	44.9%	±3.9%	3.0%	±1.9%	31.6%	±3.0%
lib rebind	26.4%	±3.4%	84.8%	±4.1%	45.1%	±3.2%
in-house	.8%	±0.7%	0.0%	±0.0%	.5%	±.4%
soft	14.9%	±2.8%	4.3%	±2.3%	11.5%	±2.0%
pam	8.6%	±2.2%	1.3%	±1.3%	6.2%	±1.5%
encl	.9%	±0.7%	1.3%	±1.3%	1.1%	±.7%
unbound	.0%	±0.0%	0.0%	±0.0%	.0%	±.0%
other	3.2%	±1.4%	5.3%	±2.5%	3.8%	±1.2%
JOINT COVERING (Hardcovers only)						
Sample size	***465***		***303***		***768***	
leather	1.5%	±1.1%	1.7%	±1.5%	1.6%	±.9%
buckram	32.3%	±4.3%	84.4%	±4.1%	84.4%	±2.3%
other cloth	52.0%	±4.6%	1.0%	±1.1%	1.0%	±.6%
paper	14.0%	±3.2%	1.0%	±1.1%	1.0%	±.6%
other	.2%	±0.4%	11.9%	±3.7%	11.9%	±2.1%
LEAF ATTACHMENT	***643***		***303***		***946***	
sewn	52.8%	±3.9%	23.9%	±4.8%	43.6%	±3.2%
stapled	2.8%	±1.3%	1.3%	±1.3%	2.3%	±1.0%
oversewn	12.3%	±2.5%	51.9%	±5.7%	24.9%	±2.8%
adhesive	18.0%	±3.0%	13.9%	±3.9%	16.6%	±2.4%
stabbed	9.2%	±2.2%	9.0%	±3.2%	9.1%	±1.8%
none	.6%	±0.6%	0.3%	±0.6%	.5%	±.4%
other	4.3%	±1.6%	0.0%	±0.0%	3.0%	±1.1%
PAPER TYPE						
coated	19.3%	±3.1%	36.3%	±5.4%	24.7%	±2.7%
uncoated	67.9%	±3.6%	31.6%	±5.2%	56.0%	±3.2%
both	12.8%	±2.6%	32.0%	±5.3%	18.9%	±2.5%
other						±.0%
CONDITION						
Internal binding						
no damage	79.0%	±3.2%	89.1%	±3.5%	82.2%	±2.4%
minor damage	6.5%	±1.9%	2.3%	±1.7%	5.2%	±1.4%
major damage	14.5%	±2.7%	12.6%	±3.7%	12.6%	±2.1%

Summary Statistics

	MONOGRAPHS		PERIODICALS		TOTALS	
Size of Sample	***643***		***303***		***946***	
(unless stated otherwise)						
External binding						
no damage	68.4%	±3.6%	84.5%	±4.1%	73.6%	±2.8%
minor damage	8.7%	±2.2%	2.0%	±1.6%	6.6%	±1.6%
major damage	22.9%	±3.3%	13.5%	±3.9%	29.8%	±2.9%
Paper						
no damage	92.2%	±2.1%	95.8%	±2.3%	93.3%	±1.6%
minor damage	4.7%	±1.6%	2.9%	±1.9%	4.1%	±1.3%
major damage	3.1%	±1.3%	1.3%	±1.3%	2.5%	±1.0%
Paper acidity						
Sample size	***520***		***191***		***711***	
not acidic	16.2%	±3.2%	13.1%	±4.8%	15.5%	±2.3%
acidic	25.1%	±3.7%	27.8%	±6.4%	26.0%	±2.8%
highly acidic	57.6%	±4.3%	59.1%	±7.0%	58.5%	±3.1%
Brittleness	***643***		***303***		***946***	
1-2 folds	14.0%	±2.7%	16.8%	±4.2%	14.9%	±2.3%
3-4 folds	8.2%	±2.1%	8.9%	±3.2%	8.5%	±1.8%
5+ folds	74.0%	±3.4%	73.9%	±5.0%	74.0%	±2.8%
not tested	3.8%	±1.5%	0.4%	±0.7%	2.6%	±1.0%
Environmental damage						
none	88.8%	±2.4%	88.1%	±3.7%	88.5%	±2.0%
minor damage	10.8%	±2.4%	11.6%	±3.6%	11.0%	±2.0%
major damage	.4%	±0.5%	0.3%	±0.6%	.5%	±.4%
Mutilation						
none	89.3%	±2.4%	94.1%	±2.7%	90.8%	±1.8%
minor damage	10.4%	±2.4%	5.6%	±2.6%	8.9%	±1.8%
major damage	.3%	±0.4%	0.3%	±0.6%	.3%	±.3%
NUMBER OF ILLUSTRATIONS						
none	26.4%	±3.4%	12.2%	±3.7%	21.9%	±2.6%
some	29.4%	±3.5%	27.4%	±5.0%	28.9%	±2.9%
many	33.9%	±3.7%	42.2%	±5.6%	36.6%	±3.1%
most	10.3%	±2.4%	18.2%	±4.4%	12.8%	±2.1%
TYPES OF ILLUSTRATIONS						
color	19.9%	±3.1%	50.2%	±5.6%	29.6%	±2.9%
continuous tone	1.9%	±1.1%	0.0%	±0.0%	1.3%	±.7%
half tone	52.9%	±3.9%	81.0%	±4.4%	61.9%	±3.1%
line illustrations	32.3%	±3.6%	70.3%	±5.2%	44.5%	±3.2%
original graphics	2.3%	±1.2%	1.3%	±1.3%	1.6%	±.8%
original photos.	.2%	±0.3%	0.0%	±0.0%	.1%	±.2%
maps	42.6%	±3.8%	66.7%	±5.3%	50.3%	±3.2%
overlays	.3%	±0.4%	0.0%	±0.0%	.2%	±.3%
fold-outs	12.6%	±2.6%	13.9%	±3.9%	13.0%	±2.1%
loose material	2.2%	±1.1%	0.7%	±0.9%	1.7%	±.8%
illus endpaper	1.4%	±0.9%	0.0%	±0.0%	.2%	±.3%

Decade Statistics

Age by Decade

size of sample = 910

Decade	% of collection	S.E.
1860	.2%	±.3%
1870	.2%	±.3%
1880	.3%	±.4%
1890	.7%	±.5%
1900	1.8%	±.9%
1910	2.7%	±1.1%
1920	5.6%	±1.5%
1930	6.6%	±1.6%
1940	6.9%	±1.6%
1950	11.5%	±2.1%
1960	17.9%	±2.5%
1970	21.6%	±2.7%
1980	24.0%	±2.8%

Brittleness by Decade

Decade	% of collection	S.E.	sample size
Pre-1900	81.0%	±14.5%	29
1910	92.0%	±10.9%	25
1920	78.0%	±11.6%	50
1930	60.0%	±12.5%	60
1940	41.0%	±12.2%	63
1950	20.0%	±7.7%	105
1960	15.0%	±5.5%	163
1970	5.0%	±3.1%	197
1980	.9%	±1.3%	218

Region of Publication

Size of sample = 932

Region	% of collection	S.E.
Africa	.2%	±.3%
Asia	2.7%	±1.0%
Europe	29.4%	±2.9%
Latin America	1.3%	±.7%
North America	66.4%	±3.0%

APPENDIX 6.4
SAMPLE OUTLINE FOR CONDITION TASK FORCE REPORT

Introduction

Scope of the study
Description of methodology
Strengths, limitations, and special features of the approach

Description of Collection Conditions

Overview (range of materials in the surveyed collection)
Discussion of materials in good condition
Discussion of major condition-related problems and the collections affected
Ranking of problems based on number and significance of affected items
Comparison with conditions reported by other libraries

Recommendations

Observations regarding ongoing monitoring of needs, survey methods (based on survey experience)
Prioritized list of collections to be surveyed in the future
Immediate uses of survey findings
Short term measures to control problems
Long term remedial and preventive strategies

Appendices

Generic survey form
Compilation of statistical data

CHAPTER SEVEN
PHASE II: ORGANIZATION OF PRESERVATION FUNCTIONS
[Task Force C]

Introduction to Organizational Issues

In order for a library's preservation efforts to emerge as a program, as opposed to a group of related but disassociated activities, there must be an organizational locus. Over the past fifteen years, some 65 ARL libraries have developed preservation programs by reorganizing existing preservation activities and developing new capabilities. Since the scope of the preservation challenge varies from library to library, so will the scale of local effort required to mount an effective response.

There is general agreement within the library community that the following activities are aimed largely at protecting and improving the condition of library collections, and that brought under a single preservation administrator, they can form a cohesive unit:

- preservation administration (planning, policy making);
- monitoring environmental conditions in library buildings, with the goal of ensuring that they promote longevity of collections;
- conservation treatment of general and special collections, both in-house and by contracting for commercial services. Treatments range from minor repair and pamphlet binding to conservation rebinding and commercial mass deacidification;
- contracting for commercial library binding services;
- reproduction of library materials by various means (microfilming, photocopying, digitizing) to replace them; or to enhance access and protect originals from over-use;
- prevention of, and preparation for, disasters affecting collections; and
- training staff and users to handle materials in ways that enhance the life of library collections.

The organizational review to be conducted by Task Force C will focus on the operational components of a preservation program--that is, the staffed units that handle a work flow of materials. The task force will seek to determine what personnel and material resources are currently devoted to preservation, how functions are organized, what resources would be required to reshape them and to establish critical new functions, and how those functions might be organized and administered.

Organizing successfully for preservation does not necessarily depend upon establishing a preservation department, but this approach is often the one of choice. It does require the development of organizational mechanisms for the articulation of policies, and the coordinated implementation of programs that carry out those policies.

Problems in Studying the Organization of Preservation Functions

There are challenges in studying preservation functions and organization:

- Because of the heterogeneity of preservation activities, it can be difficult to amass the quantitative data that are necessary to support recommended staffing patterns. Preservation work is performed throughout the library, and interwoven with other job assignments. Decentralized library systems further exacerbate efforts to separate preservation work into precise categories and to calculate how much time is spent on which activities.

- Quantitative data alone cannot measure effectiveness. Qualitative factors such as administrative support, staff acceptance, leadership, staff performance, and appropriateness of policies and procedures are critically important.

- Program structure varies widely across the ARL membership. There is more than one viable organizational model; and the task force will have to consider what works best given the size, structure, and historical practices of the library, and the resources available. Each library has its own needs and operates in an institutional setting with its own organizational history, goals and objectives, budgets, and personnel. The nature and use of each collection is different and so must be the preservation approaches taken.

- Finally, it is difficult to determine the appropriate distribution of staff and program resources among various preservation functions. This can be done only in the context of reliable information about the preservation needs of the collections.

Assumptions Underlying the Organizational Review

Several assumptions shape the investigation and should influence the analysis and recommendations for improvement:

- Describing and inventorying preservation policies and functions provides a foundation for improving and expanding programs.

- Analysis of current preservation expenditures will provide a basis for improved future planning.

- The organizational review will suggest a number of areas for improvement and options for development, but the recommendations that will be made for placement of preservation within the library, and implementation or enhancement of program components and staffing, may be tempered by the findings of the other task forces.

- The development of a preservation program is a step-by step process that is affected by individuals, opportunities, and timing. Task Force C should concentrate on developing a factual report that describes present arrangements, identifies desirable elements in a comprehensive program, and outlines a series of short and long-term measures that will build toward a comprehensive program.

Organizing the Investigation

The task force is charged with developing information and data about the nature and scope of existing preservation activities. It drafts recommendations for upgrading existing programs and undertaking new ones. The study team will use the task force findings in preparing its final report to the library director.

The task force is generally chaired by a member of the study team and includes four to seven people, depending on the extent of the facilities and the scope of the investigation. The group should include, or have access to, people with a broad knowledge of the library's organization and the distribution of responsibilities across units; an understanding of the collections and the way they are used; and familiarity with the library's past and present programs for binding, repair, reformatting, and collections maintenance. Knowledge of current developments in the field of preservation will also be essential. Appointment of a senior collection development librarian is recommended, as is appointment of the preservation librarian, if there is one on staff.

Upon appointment, members of the task force should begin to read the study team's background paper, ***Chapters 1-4, 7, and 10*** of the ***PPP Manual, Preservation Program Models*** (a key resource for Task Force C), the five ***PPP*** resource guides that focus on preservation operations (commercial library binding, collections conservation, replacement and reproduction, collection maintenance and improvement, and the organization of these activities), and the additional readings suggested in ***Appendix 1.2*** for the task force. Libraries interested in investigating mass deacidification can refer to ***Appendix 7.2***; and in digitization, to articles cited in the supplementary reading for Task Force C in ***Appendix 1.2***. Up to twelve weeks may be allotted for conducting the investigation and preparing a report. The study team establishes the deadline, and the task force is responsible for setting its own schedule to accomplish the work within that period. The consultant may meet with the task force to discuss organizational issues and preservation program administration, and to help develop an action plan for the investigation.

Steps in the Investigation

Identifying Preservation Components

The task force will determine whether to investigate all four of the program components listed above (commercial binding, conservation, reproduction, and collection maintenance). Five separate resource guides covering these topics serve as points of departure for the investigation. The resource guides outline specific plans for evaluating the library's policies and practices, and either present or refer readers to published and unpublished supporting information. If time, staff, and/or expertise are too limited for the task force to go forward with four separate investigations and afterwards collaborate to explore organizational issues, the decision may be made to focus on the two activities that will already be underway in some form in the library--commercial binding, and collections maintenance. In this case, the task force might recommend further investigation. Perhaps, for example, a person qualified to evaluate the library's book repair program should be hired to assess current practice and make recommendations. In any case, the task force should be familiar with all resource guides so as to understand issues and trends. The guides present normative information that helps to answer the following questions about each preservation activity studied:

- Does the library currently engage in the activity?
- How is the activity organized, staffed, and administered?
- Is the activity of appropriate scope, both in terms its range of capabilities and production levels, to meet the needs of the library? Are policies and procedures technically current appropriate?
- Are there program components that should be created, reshaped, or expanded?

Determining Information Needs

Careful analysis of the library's preservation operations will require several different kinds of information that must usually be sought in different ways:

Policies

The library may not have a preservation policy as such, but preservation issues will be implicit in collection development, circulation, and other policies. Identification and compilation of these issues will make it possible to recognize lacks and contradictions that now exist in the library's official position on care of its holdings. It may be, for example, that the library is committed to building strong, collections of materials published in a country that typically manufactures and uses very acidic paper. The library may not, however, have acknowledged the short shelf life of those materials by developed a strategy for preserving their information content.

Procedures

Some procedures will be documented in writing; others must be observed. Each resource guide contains information that will help task force members evaluate findings.

Staffing

The resource guide ***Organizing Preservation Activities*** will be useful in analyzing existing staffing patterns. It presents a method for calculating the current level of effort, and used in conjunction with organizational data compiled in the ***ARL Preservation Statistics*** over the past several years, should yield meaningful numbers.

Budgets

The ***ARL Preservation Statistics*** provide a framework for defining and calculating preservation expenditures. It will be helpful to determine how data reported by the library in the past were captured and calculated. With experience libraries have become more sophisticated and systematic in their efforts to document the preservation effort, and the most recent reports are likely to be the most reliable.

Gathering Information

The task force must decide where and how information can be found and how much should be sought. Individuals or subgroups can then be assigned to gather it. Regardless of the specific approaches employed in the data-gathering process, the goal is to be able to answer the following questions about of the four program components under consideration:

- What is done, how, and how much?
- Who does it? (How many people? Have they had adequate training opportunities?)
- What instructions, manuals, and other in-house documents guide the activity?
- Who decides what is to be done, using what criteria?
- What organizational relationships shape the activity? How well are they coordinated?
- What is the current level of financial support?
- What is the level of quality and effectiveness of the activity, as measured against the standardized procedures presented in the resource guides?
- How do quality and quantity relate to the level of need?
- What are the major strengths and limitations of current activities?

Data-gathering will normally involve a great deal of personal contact between task force members and individuals throughout the library. Information gleaned through discussion and observation should be compared with data collected from other sources.

Analyzing the Data

All information gathered by task force members should be presented for discussion by the whole task force. Since much of the data collection and preliminary analysis will have been done by individual members or subgroups, all task force members should have an opportunity to review the data before the meeting. During discussions the following questions should be addressed:

- What major administrative issues and policy implications emerge from the review?
- What organizational or functional patterns emerge from the review?
- Are human resources adequate?
- Are financial resources adequate?

- How comprehensive are existing policy statements relating to preservation? Are there gaps or contradictions? To what extent are existing policies implemented?

- What functions or categories of activities appear to be inadequately performed? How serious are the inadequacies in relation to the apparent need? What are the apparent causes of the problem?

- How many different kinds of preservation decisions are being made? Are they coordinated? Based on appropriate criteria or guidelines? Made by appropriate staff?

- Are space and equipment adequate?

- Are staff appropriately trained and supervised?

- Are procedures appropriate and based on technically current knowledge?

- What are the library's preservation strengths? What areas seem to present the greatest potential for short-term development? What areas seem to be important foci for long-term planning and development?

Developing Recommendations for Organizing Preservation Activities

Based on its assessment of current practice, both in the library and in other institutions, the task force drafts recommendations for improving, implementing, and managing the operational components of a preserving program. The following questions should be considered:

- What possible approaches might be taken to solve each of the major problems identified?

- What are the pros and cons of each potential solution?

- How do the potential solutions to each problem rank in terms of beneficial impact on the collections?

- How do they rank in terms of ease of implementation?

Successful recommendations strike a balance between the ideal and what the library can realistically expect to accomplish. The goal is to document what would be required to develop an appropriate range of preservation capabilities within the library, and to suggest how these might be organized or reorganized effectively. The organizational models presented in the ***Preservation Program Models*** report provide a point of departure for considering options. Recommendations should take into account interim measures that acknowledge the constraints and limitations facing the library.

Potential recommendations should be organized by operation (collections conservation, replacement and reformatting, etc.). Spelling out the relationships between desired changes and the methods for achieving them will aid in avoiding the presentation of massive shopping lists or vague restatements of principles.

Taken as a whole, the draft recommendations should summarize the task force's findings and judgments about appropriate steps for improving and expanding existing preservation activities and coordinating them effectively.

Reporting to the Study Team

The task force report to the study team should follow any guidelines that were established by the team or set forth in the charge. It should include:

- a brief description of the task force methodology,
- a review of current activities and organizational patterns,
- a discussion of major strengths and weaknesses identified through the investigation, and
- a presentation of recommendations for improvement

The sample outline that appears in ***Appendix** 7.3* can be adapted as appropriate to suit local objectives. The task force report is a working paper. Its contents should be logically organized and clearly expressed, but its prose need not be highly polished. Its main purpose is to inform the study team, which will integrate the findings of all task forces and make final recommendations.

APPENDIX 7.1
SEQUENCE OF TASKS FOR THE ORGANIZATIONAL REVIEW

Preparation

Read background paper prepared by study team, ***Chapters 1-4, 7,*** and ***10*** of the ***PPP Manual, Preservation Program Models***, and the readings for Task Force C listed in ***Appendix 1.2***.

Plan activities and assign initial tasks

Identify preservation functions and organizational factors

Determine information needed and probable sources
Assign individuals and subgroups to collect it
Assemble all data

Analyze data

All members study data
Discuss; identify major strengths and weaknesses
Determine long-range goals for preservation capabilities in the library

Develop recommendations

Brainstorm potential solutions to major problems
Analyze and rank solutions
Draft recommendations

Appendix 7.2
MASS DEACIDIFICATION: ISSUES FOR CONSIDERATION

Richard Frieder
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Overview and Background

What is mass deacidification?
Deacidification is a chemical treatment that lengthens the life of paper by neutralizing damaging acids and depositing an alkaline reserve to retard the development of acids in the future. It is estimated that deacidification will extend paper life by a factor of three to five (e.g., an untreated paper that has an expected useful life of forty years will last from one hundred twenty to two hundred years after treatment). "Mass" deacidification simply means that rather than treating one item at a time, hundreds or thousands are treated together in a large chamber. In one sense, the term "mass deacidification" has become somewhat misleading. It was originally anticipated that libraries would treat hundreds of thousands or even millions of items over the course of a relatively few years. While ultimately this may occur in some libraries, it is now recognized that deacidification can be pursued on a smaller but still significant scale.

Why is mass deacidification needed?
Around 1850, in response to a greatly increased demand for paper, manufacturers began using new ingredients that increased fiber supplies and facilitated processes. What they did not know was that some of these ingredients would react chemically over several decades to produce acids that, if left unchecked, eventually weaken fibers so severely that paper becomes brittle. Acidic, discolored, brittle paper was first noticed before 1900, but only in the past thirty years has it been recognized in research libraries as a critical and universal problem of enormous proportions. Virtually everything printed after the middle of the nineteenth century and before the 1980s (when alkaline paper began to be used more widely for book publishing) is acidic, and a significant portion of it has already become brittle. Mass deacidification is a preventive treatment that can dramatically slow down the process of acid deterioration. It is the material that is presently acidic but not yet brittle that can be most successfully preserved through mass deacidification.

Why do libraries need to preserve paper?
While other formats are playing an increasingly important role in the provision of library services, most research collections are still primarily paper-based. It remains to be seen whether paper will be supplanted by alternative means of information storage and transfer, and if it is, whether a significant percentage of retrospective library holdings will be captured by the new technologies. In the meantime, paper collections must be preserved so that irreplaceable information is not lost in anticipation of a still uncertain future.

What is the relationship between mass deacidification and other preservation strategies?
Mass deacidification is just one of several preservation strategies that should be considered in preserving research collections. Each strategy has its appropriate application, depending on the nature and condition of the collections and the way they are intended to be used.

History and Current Status

While deacidification of individual items has been possible for many years, attempts at developing a method for mass-scale treatment did not begin until relatively recently. Research activity accelerated through the 1970s, and by the late 1980s several processes were being developed by different corporations. Some of these companies have since abandoned or scaled down their efforts, largely because a market for services has been slow to develop. As of this writing (1992), the DEZ process, now offered by Akzo Chemicals Inc., is the only process that has been found to satisfactorily address the chemistry and organizational concerns described below. It is now being used by several United States libraries on a commercial basis. (Approximate cost at present is $15 per book. It is anticipated that the cost will be reduced when full-scale production is achieved).

Increased use of deacidification services is vital for encouraging competition within the mass deacidification industry, and resultant economies and high quality service. Since mass deacidification is still a fairly recent technology, and new information surfaces frequently, any library considering its use should make sure to review the latest reports available. There are some problems presented by mass deacidification, which while they are surmountable, are also complex. The two broad areas of : concern are related to chemistry and organizational issues.

Chemistry Issues

Does the process work?
Determining whether a process neutralizes paper successfully and deposits an appropriate amount of alkaline reserve must be done in a laboratory by professional chemists. The Library of Congress (LC) sponsored a project in 1991 in which three mass deacidification processes were tested extensively, and which resulted in a useful report, ***Report to The Library of Congress, Contracts and Logistics Services, in response to Solicitation No. RFP90-32, June 10, 1991, Project 3717*** (see citation in the brief bibliography that follows).

Is the process safe?
Any chemical process must be carefully examined to assess its toxicological risks, and this too must be done by professionals in a laboratory setting. Important information on toxicological research appears in the Committee on Institutional Cooperation (CIC) document ***Mass Deacidification: A Report to the Library Directors*** (see citation in bibliography).

Does the process produce unacceptable side effects?
Books and other materials found in library collections typically comprise a broad range of components, including a wide variety of papers, many different kinds of adhesives, covering materials, and inks. One of the great challenges of transforming deacidification into a mass process is to minimize the side effects that will occur when heterogeneous materials are treated together. Examples of possible side effects are loose or detached labels, blistered cloth, and visible marks left on certain types of paper. Some of these problems will be insignificant and therefore acceptable, while others will not. The LC and CIC reports cited herein are good sources of information on side effects.

Organizational Issues

The following list encompasses a wide variety of concerns pertinent to the decision to put mass deacidification to practical use, and should be considered during decision making:

- How should material be selected for treatment? By collection or subject area? By level of use? By date of acquisition or publication? Should an attempt be made to coordinate selection with other libraries?
- Do any materials need to be preselected out of the work stream to avoid damaging side effects of the chemical process?
- What are the in-house processing costs of mass deacidification, i.e., in addition to paying the vendor for the service, what costs will be encountered?
- Should materials be physically marked in some way to indicate that they have been treated? Should a note be entered in the bibliographic record?
- What should be included in a contract for mass deacidification services?
- What should be done to achieve quality control of treated materials?

While answers to these questions will be specific to each library that engages in mass deacidification, the CIC report includes useful information with regard to issues and decision making.

How Can a Library Determine Whether to Employ Mass Deacidification?

Determining whether to employ mass deacidification will depend on circumstances specific to each library. Some questions to consider are:

- Does the collection contain material that is acidic but not yet brittle?
- If so, might this material be of long term value?
- If so, is it desirable to maintain the original paper format, either because it best meets user needs, or because it is most economical, or both?

What can a Library Expect When it Begins Mass Deacidification?

Implementing a mass deacidification program is somewhat analogous to operating a library binding program. Material must be chosen, prepared, packed, and shipped to a vendor. When the material returns it must be unpacked, quality control and bibliographic control must be performed, and materials returned to the shelf. A contract between library and vendor should be agreed upon, and a day-to-day relationship conducted. Because it is a new undertaking, contracting for deacidification services will be somewhat difficult at first. Over time, however, it is likely to become as routine as contracting for binding.

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Mass Deacidification: A Report to the Library Directors. Champaign, IL: Committee on Institutional Cooperation, April 1992.

Sparks, Peter G., ed. *A Roundtable on Mass Deacidification: Report on a Meeting Held September 12-13, 1991 in Andover, Massachusetts.* Washington, DC: Association of Research Libraries, 1992.

Turko, Karen. *Mass Deacidification Systems: Planning and Managerial Decision Making.* Washington, DC: Association of Research Libraries, 1990.

APPENDIX 7.3
SAMPLE OUTLINE FOR TASK FORCE REPORT ON THE ORGANIZATION OF PRESERVATION ACTIVITIES

Introduction

Scope of the study
Description of methodology
Strengths, limitations, or special features of the approach

Description of Current Preservation Activities, By Function

Policies
Organizational Patterns
Procedures
Staffing
Expenditures

Analysis of Organizational Options

Strengths and weaknesses of the present situation
Brief description of comprehensive program goals
Potential organizational patterns

Recommendations, by function

Improvements in existing programs
Development of new programs
Adapting the organizational structure

Appendices (as appropriate)

Compilation of excerpts from policy statements relating to preservation
Profile of preservation expenditures
List of in-house manuals and other documentation describing preservation activities
Etc.

CHAPTER EIGHT
PHASE II: DISASTER PREPAREDNESS
[Task Force D]

Introduction to Issues

For purposes of the *Preservation Planning Program*, disaster preparedness is defined as a library's readiness to respond to those accidental calamities that threaten the physical safety of materials in the library's collections. The most frequently cited of these calamities is water damage, which usually results from such sources as violent weather, plumbing failure, and fire hoses. Water, in quantity, is indeed a potent destructive agent to most library materials. Fire can be even more destructive. It often completely destroys parts of a collection, chars more, and generally leaves all materials sooty and with an intolerable smoky odor--besides creating the water problems associated with extinguishing it. In earthquakes, shelving collapses and fires and water-related incidents are initiated. Dust storms and volcanic ash fallout deposit abrasive particles that are damaging to books and other paper-based records; and very destructive to newer media such as film and magnetic tape, and to the equipment on which film and electronic media are read.

Disaster control encompasses three distinct activities: prevention, preparedness, and response. The extent to which a library takes steps to both prevent and ameliorate the effects of disasters can reduce their incidence and sometimes their impact. The dilemma is that responding to the potential for disaster is an activity that appears remote from daily responsibilities. Attending to the location of pipes and fire extinguishers, stockpiling clean newsprint and maintaining an emergency telephone list, do not directly further the service mission of the library. Too much attention given to disaster preparedness may be as wasteful of the library's human resources as too little is dangerous to its material resources. A sensible balance must be struck.

Preventive activities, once they have been identified, can generally be built into an institution's ongoing maintenance routines, with the provision that unlike periodic refurbishing, they must not be put on the "deferred maintenance" list in economically strained times. Preparedness involves creating and periodically updating contingency plans, assembling critical emergency supplies, identifying sources for more should they be needed, collecting information about disaster recovery services and making contacts, and training staff to deal with emergencies efficiently and effectively.

Challenges in Determining How to Improve the Library's Disaster Readiness

The range of potential calamities can make it difficult to focus on the elements that should be included in a responsible disaster plan. It doesn't take long to develop a discouraging list of potential problems. Theoretical possibilities need to be kept in perspective by comparing them with actual incidents in which materials have suffered damage in the recent past.

A second problem lies in the uniqueness of each accident. Contingency plans must be flexible, heavy on general principles, and light on minute details. An intricate plan for deploying a hundred volunteers to move soaked materials from the central stacks will be of little use if the accident involves an upset bucket of detergent that has drenched five boxes of priceless manuscripts. A third problem relates to the seductiveness of the topic. It is too easy to become caught up in the intricacies of creating a truly comprehensive plan.

Assumptions Underlying an Investigation of the Library's Disaster Readiness

Several assumptions shape the investigation and should influence the analysis and recommendations:

- Most libraries are not adequately prepared for accidents that threaten the collections, and thereby endanger them.
- Group study of the subject in itself enhances the library's preparedness, since informed people are the single most important factor in responding successfully to emergencies.
- Protection against and recovery from water damage should be emphasized since this is the most common danger, but other potentially destructive events should also be included in contingency planning.
- Contingency plans for coping with emergencies not directly affecting the collections (e.g., medical emergencies, elevator breakdowns, bomb threats), though needed, do not fall within the scope of the *PPP*.

Finally, this module of the *PPP* is similar to the module dealing with the physical condition of the collections, inasmuch as the task force will actually initiate some of the activities that it identifies as goals. As a result, an important element of a comprehensive preservation program will be in place at the conclusion of the planning study.

Organizing the Investigation

Task Force D investigates the library's level of disaster preparedness on behalf of the study team and develops recommendations for improvements that the team will use in preparing its final report to the library director. A major element of this work is creating the key components of a local disaster plan. Task Force D is generally chaired by a member of the study team, and includes three to six people, depending on the extent of the facilities and the scope of the investigation.

The group should include, or have access to, people with a broad knowledge of the library's facilities and collections, familiarity with existing emergency plans, and if possible, previous disaster experience. The appointment of an officer from the institution's safety office or facilities department as consultant to, or a member of, the task force may be valuable.

Upon appointment, members of the task force should begin to read the study team's background paper, ***Chapters 1-4*** and ***8*** of the ***PPP Manual, Preservation Program Models***, and Connie Brooks's ***Disaster Preparedness*** resource guide (see ***Appendix 1.2*** for full citation.) Up to twelve weeks may be allotted for conducting the investigation and preparing a report. The study team establishes the deadline, and the task force is responsible for setting its own schedule to accomplish the work within that period. The consultant may meet with the task force to review the basic principles of disaster preparedness and to help develop an action plan for the investigation.

Steps in the Investigation

Assessing Current Vulnerability
To establish a framework for its work, the task force begins by compiling a list of the kinds of disasters, crises, and accidents that could have a detrimental effect on materials in the collections. About each of these potential dangers, the group should consider briefly the following questions:

- How likely is it that this will happen here?
- What kind of damage would such an event cause to various types of materials?
- Can it be prevented? If so, how? If not, are there protective measures that can be taken now to reduce damage to materials if and when the problem occurs?
- If it occurred, what would have to be done to repair the damage? What resources would be needed? Would speed be a critical factor?

To determine the library's current level of preparedness, the task force assembles, to the extent possible, information about accidents or disasters that have occurred within the library in the last ten years, in which materials were actually damaged. It also assesses the dangers that currently threaten the collections.

The investigation will involve reading internal reports, talking to knowledgeable staff in the library and in other parts of the parent organization (e.g., the fire department, facilities department), and touring library buildings to evaluate them against one of the checklists recommended in Brooks' ***PPP Disaster Preparedness*** resource guide. (If the task force is small and/or the institution comprises many buildings, the study should focus on the main library, and task force recommendations include plans for extending the study to other buildings.) This survey should be coordinated with the investigation of the environmental task force, which will be examining the library's physical facilities in a complementary way. After discussing possible sources of information, individuals or subgroups are assigned to proceed with the investigation.

After information is gathered and presented to all members of the task force, each significant historical incident and element of risk is then discussed, considering the following questions:

- Could a disaster that has occurred have been prevented? If so, how? If not, what protective measures taken ahead of time might have reduced the damage?
- Was the response to the problem timely? Effective? Well-organized? Were necessary resources and expertise available? Who was in charge? Was help needed from outside the library?
- Was there any follow-up to prevent a recurrence?
- What threats to the collection currently exist? Which are most serious? Could they be corrected?
- Do any disaster plans now exist? Are they current?
- Does anyone within the library or parent institution have special responsibility for dealing with collections-related emergencies?
- Is adequate expertise available? Is its availability known to the appropriate people?
- Are sources for emergency supplies and equipment known?
- How well-informed is the staff about emergency procedures?

From this analysis, the task force should be able to produce a list of the major strengths and weaknesses in the library's present capability to protect its collections from disaster. If the review demonstrates that the library is well prepared, the task force simply documents this in its report to the study team. In most cases, however, deficiencies will have been discovered.

Outlining a Disaster Plan

Guided by its findings and readings (in particular, Brooks' *Disaster Preparedness* resource guide, and the documents included and cited in that guide) the task force is now ready to outline a plan. Elements of the plan will generally include:

- instructions for staff regarding basic disaster response, with emphasis on the initial steps to be taken when immediate action is required and specialized expertise is not readily available;
- a list of staff with key responsibilities or expertise to be called on for assistance;
- a list of emergency supplies to be stocked at all times;
- a list of sources for prompt acquisition of additional supplies, equipment, and services;
- guidelines for determining salvage priorities in the event of a major disaster;
- plans for periodic awareness and training sessions to keep all staff informed about emergency procedures; and

- a mechanism for periodic review and updating of the plan.

The plan can also include basic instructions for handling water- and fire-damaged material, or this information can be compiled in an appendix or supplement to the plan.

The task force discusses in some detail the scope of each section, the types of information that should be included and probable sources for it, and the degree of consultation with other staff that is appropriate to ensure coordinated and acceptable planning. Individual assignments for gathering the necessary information and drafting sections of the plan are made.

All members of the task force review the draft sections, revising them as needed to fill gaps or eliminate overlap. The time table for the task force's work may not allow for the completion in detail of all sections of a disaster plan. For example, it may not be possible to locate comprehensive source information for all emergency supplies, or to develop salvage priorities for the collections. Identification of missing elements leads to the next phase of the work of the task force.

Determining Future Needs

Reviewing its findings and accomplishments thus far, the task force analyzes remaining needs, focusing on prevention and ongoing readiness:

- What needs to be done to complete the disaster plan outlined by the task force?
- What methods might be used to introduce the plan to the staff? (To ensure that new staff learn about it? To remind staff about it in the future?)
- What mechanisms are needed to keep it up to date? Where in the organization might responsibility for this be assigned?
- What topics (e.g., types of calamities, salvage instructions, salvage priorities) were not adequately covered in this study? How might they be addressed in the future?
- What preventive measures need to be taken to reduce the likelihood of disaster? Are there spaces that appear especially vulnerable to certain kinds of disasters? Are there collections deserving of special protection due to their value or uniqueness?
- Is fire protection adequate? Is maintenance adequate to control all sources of water that threaten materials? Are the collections insured?
- Which units or persons within the library or parent institution have or might assume responsibility for each preventive measure? How often should periodic monitoring and inspection be undertaken? By whom?

From this analysis the task force should be able to list specific needs for achieving and maintaining an appropriate level of disaster prevention and preparedness. The task force must strive to avoid both sweeping generalizations and the minutiae of repairing a leaky gutter or replacing a fire extinguisher. An appropriate level of detail will be easier to achieve by emphasizing the establishment of an ongoing disaster preparedness process.

Developing Recommendations

Successful recommendations strike a balance between the ideal and what the library can realistically expect to accomplish. They should be organized into meaningful categories, and should include as many as possible of the following components:

- description of the problem,
- suggested action,
- desired outcome,
- responsibility for implementation,
- time frame for implementation, and
- general financial and/or staff resources required.

The ***PPP*** task force reports developed by other ARL libraries provide helpful models for framing recommendations.

The report of Task Force D should document what would be required to achieve an optimum level of disaster preparedness, and suggest interim or compromise measures that take into account the constraints facing the library. Some of these will be physical, some economic. Some may be surmountable in the short or long term, while others (location within tornado country or on a flood plain) will remain outside the control of the library.

Proposed activities can be organized by function (e.g., preventive, remedial), or by potential hazard (e.g., aged plumbing, fire)./Recommendations should combine broad goals with specific objectives. Spelling out the relationships between the desired change and the methods for achieving it will aid in avoiding the presentation of massive shopping lists or vague restatements of principles.

For example, rather than recommending that the library install a sprinkler system in the archives, replace aging smoke detectors in the science stacks, and insure the collections, the recommendation might read:

> The library should implement a comprehensive fire prevention and insurance program for the collections, with first priority given to the archives and the old main building. Steps toward this goal would include:

- requesting a fire prevention audit from the local fire department,

- hiring a risk management specialist as technical consultant to evaluate the condition and reliability of existing detection and extinguishing systems,

- assembling data from the present insurer and one or two competitors on insurance packages and rates for collections protected in various ways,

- working with the parent institution's safety office to develop a phased program for upgrading systems in each building,

- investigating the feasibility and cost of providing a state-of-the-art sprinkler system for the archives, etc.

Such a recommendation identifies and describes the problem and suggests options for dealing with it. Recommendations should be accompanied by whatever information the task force has uncovered regarding cost figures, side benefits, and adverse consequences. For example, the supporting data might point out that one insurance company refused to write a policy for the science collections because its inspector found the smoke detection system to be inadequate, or that an X-thousand-dollar sprinkler system can be justified for the protection of an X-million-dollar collection.

Taken as a whole, the draft recommendations should summarize the task force's findings and judgments about priorities and approaches for improving the library's ability to prevent and respond to disasters endangering the collections.

Reporting to the Study Team

The task force report to the study team should follow any guidelines that were established by the team or set forth in the charge. It should include:

- a brief description of the task force methodology,
- an analysis of the present vulnerability of the collections,
- the disaster plan outlined by the task force, and
- a presentation of recommendations for improvement.

A sample outline appears in *Appendix 8-2*. It can be adapted as appropriate to suit local objectives. The task force report is a working paper. Its contents should be logically organized and clearly expressed, but its prose need not be highly polished. Its main purpose is to inform the study team, which will integrate the findings of all task forces and make final recommendations.

APPENDIX 8.1
SEQUENCE OF TASKS FOR DISASTER PREPAREDNESS STUDY

Preparation

Read background paper prepared by study team, ***Chapters 1-4*** and *8* of the ***PPP Manual, Preservation Program Models***, and Brooks' ***Disaster Preparedness*** resource guide.
Plan activities and assign initial tasks.

Brainstorm potential disasters

Investigate library's response to past disasters, and current risks to the collections
Identify information needed and probable sources
Assign individuals or subgroups to collect it
Assemble and analyze information

Outline disaster plan

Decide on elements to be included
Determine information needs and probable sources
Assign responsibility for gathering information and drafting sections of the plan
Review and revise draft sections of plan

Determine remaining needs

Develop recommendations to be considered by the study team

Prepare report to study team

Outline contents of the report and assign drafting responsibilities
Review and revise sections as completed
Complete report and submit to study team
Prepare presentation to joint meeting of study team and task forces

APPENDIX 8.2
SAMPLE OUTLINE FOR DISASTER PREPAREDNESS TASK FORCE REPORT

Introduction

Scope of the study
Description of methodology
Strengths, limitations, or special features of the approach

Analysis of vulnerability of the collections

Geographic and climate factors
Condition of buildings and systems
Highlights of recent disasters that resulted in damage to materials
Description of present state of preparedness

Outline of Disaster Plan

This might appear in the body of the text, or be referred to briefly and included as an appendix to the report

Recommendations

Disaster-proofing the facilities
Educating the staff
Establishing and maintaining an acceptable level of preparedness

Appendices

Excerpts from existing documents dealing with emergency procedures
Brief chronology of recent disasters
Disaster plan (if not included in text)

CHAPTER NINE
PHASE II: STAFF AND USER EDUCATION
[Task Force E]

Introduction to Issues

During the past decade the number of libraries that have undertaken preservation planning studies and implemented formal preservation programs has increased slowly but steadily. The commitment to maintain library collections in usable condition cannot be met, however, simply by establishing a microfilming program, building a conservation facility, or upgrading library binding procedures-however extensive and sophisticated those efforts might be. Much of the work of a preservation department is remedial, and takes place after time, improper storage conditions, and careless handling have rendered library materials fragile and damaged.

In order to maximize the possibility that any given item in a collection remains in usable condition and readily available to readers, a preservation program must have a positive effect on materials from the moment each item is acquired. This goal is neither easily nor wholly achievable, but it is worth pursuing. Meeting it depends partly on educating staff and users. The people who work in and use a library must understand their role in extending the useful life of the collections, and be willing to act on that understanding.

While teaching people to handle library materials in non-damaging ways is, taken at face value, an easily sold institutional objective, several factors make its implementation difficult. First, we live in a time and place where shared resources are rare. We are used to owning things, and treating them as we see fit. The idea that a borrowed book is the property of many, and the right to consult it a privilege, does not necessarily come naturally to the modern reader. Nor does a sense of responsibility for ensuring that library materials are passed on from borrower to borrower in unchanged condition.

Second, the principles that underlie guidelines for proper care and handling are not widely known. At no point during the course of a typical elementary, high school, or college education are students taught how to take a book off the shelf without stressing the binding, to handle microfilm properly, or to sort through a large group of photographs without damaging them.

Third, adherence to guidelines that result in improved maintenance of collections is often troublesome, time consuming, and/or costly. Returning a book in a book drop, for example, is usually more convenient than returning it over the counter at a service desk. Similarly, it is easier to turn the lights on in a special collections stack area first thing in the morning, and leave them on until the end of the day, than to turn them off whenever possible to protect the collections.

For these reasons, preservation training is critical, and its benefits many and varied. For example:

- A staff member who can identify a text block that has loosened slightly in its case will send it to the collections conservation unit for hinge tightening--a five minute procedure. When minor structural problems go unrecognized, a single additional circulation often results in the need for far more extensive treatment, or commercial rebinding.

- A curator who is aware of the damage that acidic file folders, envelopes, and boxes do to library materials will order protective enclosures that are manufactured from alkaline/buffered papers and board; and thereby prevent needless destruction of library materials.

- A reading room supervisor who has learned that light not only fades and discolors paper, cloth, and leather--but that it also speeds up the chemical reactions that cause these materials to deteriorate--will be inclined to use existing window shades, blinds, and curtains to protect library materials from direct sunlight.

- A researcher who has seen a photograph of the contents of a book drop bin that is filled to capacity--the pages of volumes crushed, and bindings distorted out of shape--will be more likely to return materials over the counter at the circulation desk. Use of book drops results in a high incidence of structural damage to bound volumes, and undermines the impact of a sound conservation treatment program.

- A student who has reflected on the collective value of research library materials may be less inclined to rip a chapter out of a book, and choose to photocopy it instead. Vandalism cannot be eliminated, but it can be controlled through widespread consciousness raising. Appreciation for research libraries can be enhanced by calling attention to the fact that most materials are acquired for permanent retention; and that a high percentage of research library holdings is difficult or impossible to replace.

- A faculty member who has read the results of a condition survey conducted in the library, and who is informed regarding the library's efforts to expand its preservation activities, is likely to be responsive to the suggestion that a segment on the care and handling of library materials be included in an appropriate freshman course.

Challenges in Planning a Staff and User Education Program

There are some significant challenges in planning and implementing a preservation-related staff and user education program:

- Because a library's staff and user population is in constant flux, and because our knowledge of methods for maintaining library collections in usable condition is constantly expanding, the work of educating people is never complete.

- Taken together, the people who work in and use a library make up a large population. It is difficult to design a program that will reach each person.

- Strategies for educating users are not necessarily straightforward. Subtlety sometimes works best. For example, distribution of plastic bags on rainy days for the protection of circulating materials suggests to the borrower that those materials are valuable and that the library expects users to safeguard them. Likewise, maintenance of clean, orderly stack areas conveys the message that the collections are important and deserve the best of care.
- Educational activities can take many forms and be directed toward various audiences. It is important to match appropriate methods to particular target groups so that training is effective.

Assumptions Underlying an Investigation of the Library's Current Level of Preservation Awareness, and the Need for Additional Education

Several assumptions shape an investigation of the level of preservation education and awareness in the library, and should influence the analysis of findings and the formulation of recommendations.

- If the importance of proper care and handling of library materials is brought to the attention of staff and users, and they are taught how to treat collections responsibly, most will.
- Educating library staff and users will improve the condition of collections--both in the library that takes steps to raise readers' level of awareness; and in the other libraries that those readers use, and where staff may later work.
- It is possible, through discussion, surveying, and observation, to discover the degree to which preservation-related information is currently being disseminated throughout the library.
- It is possible, by becoming familiar with the literature and with available training tools, to determine what preservation-related information should be conveyed to library staff and users, and what methods might be appropriate for reaching particular target groups.
- Affordable means of educating library staff and users can be identified and acted upon.

Organizing the Investigation

Task Force E conducts an investigation to assess the nature, scope, and effectiveness of the library's current efforts to provide preservation training for staff and users; analyzes its findings; and drafts recommendations for developing a comprehensive education program. The study team will use this information in preparing its final report to the director. The task force is generally chaired by a member of the study team and includes three to six people, depending on the extent of the facilities and the scope of the investigation.

The group should include, or have access to, people who know how the library's collections are used and by whom, who have a broad knowledge of library staffing patterns and the major day-to-day responsibilities of each unit and sub-unit within the organization; and who have a general interest in teaching and training activities. If the library has a bibliographic instruction unit or committee, an office of education, or any other unit that is specifically responsible for training activities, a member of that unit should be included on the task force.

Upon appointment, members of the task force should begin to read the study team's background paper, ***Chapters 1-4*** and ***9*** of the ***PPP Manual, Preservation Program Models***, and Wesley Boomgaarden's ***Staff Training and User Awareness in Preservation Management*** resource guide (see ***Appendix 1.2*** for full citations.). The group should also view as many as possible of the general audiovisual programs listed in Susan Swartzburg's "Audiovisual Aids on the Preservation and Conservation of Library and Archival Materials" (CAN, no. 49), which is included in Boomgaarden's resource guide. Up to twelve weeks may be allotted for conducting the investigation and preparing the report. The study team establishes the deadline, and the task force is responsible for setting its own schedule to accomplish the work within that period. The consultant may meet with the task force to review the basic principles of disaster preparedness and to help develop an action plan for the investigation.

Steps in the Investigation

Identifying Appropriate Training Mechanisms and Target Groups

As task force members read the literature and view audiovisual programs, a running list of ideas should be compiled. The more meticulously ideas are cataloged, the easier will be the follow-up work of the group. Information might be separated into three categories, governed by these questions:

- What can people be taught about the preservation of library collections? Items on the list will be extremely diverse, and need not be in any particular order at the outset. Appropriate inclusions might be: correct use of bookends; correct technique for removing a single volume from a shelf; hazards of exposing various media to heat, light, and excessive moisture; importance of cleaning microform readers on a regular schedule; damage done by inappropriate repairs, and the importance of reporting (rather than repairing) torn pages and damaged bindings; and problems associated with eating and drinking in libraries.

- What groups might be targeted for preservation education? In an academic research library, groups might include: general library staff; library staff who work in units where materials are handled constantly and in large numbers (e.g., shelvers, circulation desk attendants, plating and labeling staff); student assistants; general library users; users of special collections; and faculty (who, once educated, can share the task of educating students).

- What types of preservation training programs and materials have been, or might be, developed by the library? Included here might be: potential information formats (e.g., audiovisual programs, articles placed in local newspapers); and potential forums for conveying information (e.g., meetings of the library management group, staff orientation sessions, academic classes, reference seminars). For a list of suggested formats and forums, see *Appendix 9.2*.

After gathering and reviewing background information and compiling preliminary lists, it may be worthwhile to use the brainstorming technique described in *Appendix 3.2* of this manual for the purpose of expanding the lists.

Assessing the Local Situation

Once the task force has a clear sense of what it wants to know about local library practice, it conducts an investigation to determine the following:

- What preservation training and consciousness raising is currently being carried out in the library?
- Who is responsible for what preservation-related training activities?
- Who benefits from the training?
- What activities should be added to those already underway?

This information can be gathered through observation, by conducting formal and informal discussions with staff, and/or by distributing a written survey to all library units or to all staff members. The task force also compiles copies of the preservation training tools currently in use in the library.

Individuals or teams are assigned to gather information. In a large library, one task force member might agree to make site visits to every building in the library system for the purpose of recording evidence of existing preservation training activities (e.g., signs, posters, handouts for readers); and evidence of the need for preservation training. Other task force members might agree to share responsibility for meeting with every department and library in the library system to conduct interviews and gather information.

Should the decision be made to conduct interviews, a letter of intent signed by the chair of the task force should be sent to every individual who will be interviewed. This will help to limit the need for lengthy explanation. A detailed interview strategy should be developed so that uniform information is gathered.

A written survey may take the form of a checklist, questions that can be answered "yes" or "no," open-ended questions, or some combination of these. However the investigation is conducted, it should allow for the free expression of ideas. See *Appendix 9.3* for a sample survey and interview guide.

Analyzing and Organizing Data

The data gathered through observation, interviews, and/or written surveys is organized by a member of the group, and discussed by the entire task force. All task force members should have the opportunity to review interview notes, notes from site visits, and completed survey questionnaires before the meeting. During the discussion, the following questions might be addressed:

- Does the library's program for preservation education appear to be adequate? If not, how do expressed and observed needs relate to the lists developed prior to local fact finding? (Lists can be expanded to include new information.)

- Did the fact finding seem to indicate a general enthusiasm for and interest in preservation education, or a lack of interest? Do certain library units or individuals have less interest than they should, given their specific charges or job assignments?

- Are there particular units or buildings within the library system that appear to have unusual needs, or that appear to have needs more pressing than most?

- Do the data suggest priorities for initiating or expanding preservation training activities? What suggestions were raised repeatedly by interviewees or survey respondents? What ideas occurred repeatedly to task force members?

- Are there signs of change (e.g., in the library as a whole, in a particular library unit, or in any segment of the user population) that would lead the task force to anticipate new or different needs for preservation education in the future?

- Who, in the past, has initiated preservation training activities? Who are the decision makers in this regard? Have certain people played leadership roles?

- Which person or persons in the library might assume responsibility for developing, expanding, or coordinating an ongoing program for preservation education and training for library staff and users?

Developing Recommendations

The report of Task Force E to the study team should follow any guidelines that were established by the team or set forth in the charge. The chief goal is to document the nature of the existing preservation education program for the library staff and users, and to outline ways in which that program could be expanded to meet better the goal of maximizing the life of the library's collections. As with all such tasks, choices and compromises must be made so that the final recommendations of the task force are plausible, achievable, and affordable.

Successful recommendations strike a balance between the ideal and what the library can realistically expect to accomplish. They should be organized into meaningful categories, and should include as many as possible of the following components:

- description of the problem,
- suggested action,
- desired outcome,
- responsibility for implementation,

- time frame for implementation, and
- general financial and/or staff resources required.

The PPP task force reports developed by other ARL libraries provide helpful models for framing recommendations.

Task force members should reflect on the following questions:

- What possible approaches might be taken to meet each of the major goals identified?
- What are the pros and cons of each approach?
- How do the potential approaches to meeting each goal rank in terms of beneficial impact on the collections?
- How do they rank in terms of ease of implementation?
- What are the cost implications, in broad terms?

Desirable activities might be organized into categories, for example: by target group (undergraduates, researchers, library department heads); by nature or format of the training (printed materials, presentations by knowledgeable persons, computer-assisted training); or by topic (shelving, general handling, environmental control). Spelling out the relationships between the desired change and the methods of achieving it will aid in avoiding the presentation of massive shopping lists or vague restatements of principles.

For example, rather than recommending that all student workers in all units of the library be trained, on a continuing basis, to handle materials properly, the recommendation might read:

- Student assistants make up a significant percentage of the library's work force. Because they are typically assigned to routine tasks, many handle materials constantly during the hours that they work in the library. For this reason, the preservation awareness and handling skills of student assistants has a significant impact on the condition of the collections. While mistreatment will worsen already severe collections maintenance problems, adherence to guidelines, and the ability to identify damaged materials that require remedial treatment, can actually improve the condition of the collections.

The library should develop a mechanism for ensuring that each new student worker is informed regarding the basic principles of library preservation and taught how to handle library materials properly. Steps toward that goal would include:

- Purchasing duplicate copies of a general slide-tape show and a videotape on the care and handling of books, and requiring newly-hired students to view both programs, several weeks apart, as part of their general orientation to the library. Students retaining their positions in the library for more than a year should view the programs for a second time. Individual monitors are available for student use in the Audio Library.

- Developing a section in the Student Employee's Handbook on the role of the library's preservation program. The concepts of irreplaceability and permanent retention should be stressed, and a set of guidelines for responsible handling of library materials included.
- Developing a videotape that teaches student assistants working in the circulation and shelving units to identify books and other materials that require remedial treatment.
- Encouraging library supervisors to send students to the preservation orientation workshop that is offered annually for newly hired staff.
- Developing posters that can be hung behind the circulation desk and in book sorting rooms, where student assistants may handle hundreds of volumes in a single work session. Posters should illustrate the effects of fore edge shelving, leaning, and other damaging shelving practices; and should emphasize that the collections are the shared property and concern of all students.
- Developing a preservation orientation checklist that can be used by all library units to track each student assistant's progress through the orientation program.
- Charging a person or committee with setting goals, making assignments, monitoring progress, seeing projects through to completion, and encouraging follow-through at the operations level.

Such a recommendation identifies and describes the issue and suggests options for addressing it. Recommendations should be accompanied by whatever information the task force has uncovered regarding cost figures, side benefits, and adverse consequences. For example, the supporting data might point out that while it will cost $600 to develop a professionally illustrated leaflet, the piece could reach 80,000 students in 5 years.

Taken as a whole, the draft recommendations should summarize the task force's findings and judgments about priorities and approaches for improving and expanding the library's preservation education program.

Reporting to the Study Team

The task force report to the study team should follow any guidelines that were established by the team or set forth in the charge. It might include:

- a brief description of the task force methodology,
- a discussion of the major findings and problem areas identified through the investigation, and
- a presentation of recommendations for development of a broad based educational program.

The sample report outline that appears in *Appendix 9.4* can be adapted as appropriate to suit local objectives. The task force report is a working paper. Its contents should be logically organized and clearly expressed, but its prose need not be highly polished. Its main purpose is to inform the study team, which will integrate the findings of all task forces and make final recommendations.

APPENDIX 9.1
SEQUENCE OF TASKS FOR STUDY OF PRESERVATION EDUCATION ACTIVITIES AND NEEDS

Preparation

Read background paper prepared by study team, ***Chapters 1-4*** and *9* of the ***PPP Manual***, ***Preservation Program Models***, and Boomgaarden's ***Staff Training and User Awareness in Preservation Management*** resource guide
View slide tape shows and videotapes
Compile lists of ideas
Plan strategy for conducting investigation
Assign individuals or subgroups to collect information

Conduct Investigation

Investigate current status and effectiveness of the library's preservation-related staff and user education program
Assemble and analyze information

Develop recommendations

Analyze and rank approaches to meeting objectives
Develop recommendations to be considered by the study team

Prepare report to study team

Outline contents of the report and assign drafting responsibilities
Review and revise sections as completed
Complete report and submit to study team
Prepare presentation to joint meeting of study team and task forces

APPENDIX 9.2
CHECKLIST OF FORMATS AND FORUMS FOR EDUCATING LIBRARY STAFF AND USERS

Formats

- Bookmarks
- Brochures
- Flyers and other handouts
- Printed messages tipped into problem volumes (e.g., brittle books)
- Messages on book sleeves, wrappers, boxes
- Messages appended to standard library handouts (building maps, bibliographies)
- Posters
- Procedural flags, processing forms
- Signs
- Exhibits
- Audiovisual programs for orientation sessions, loan, and display in public places
- Computer-assisted instruction
- Preservation awareness week
- Plastic bags distributed on rainy days

Forums

- Staff newsletters
- Faculty newsletters
- Student newspapers
- Alumni newspapers
- Local newspapers
- Publications of the parent organization (e.g., the university)
- Bibliographic instruction programs for users
- Routine reference work
- Users' guide to the library
- User's guide to care of personal library collections
- Student orientation (graduate, undergraduate)
- Formal academic course work
- Tours of the library conducted for visitors
- University policy regarding people who attempt to steal or willfully destroy library materials; penalties
- Meetings of teaching faculty (university senate, committees, colloquiums)
- Meetings of library friends' group
- Meetings of library departments
- All-staff meetings
- Librarians' council
- Managers' council
- Library committee meetings
- Staff association meetings
- Staff presentations (e.g., conference and workshop reports)

Orientation programs for library staff
Orientation programs for library student assistants
Preservation liaison in each library unit
Workshops, seminars, conferences, site visits
Handbooks and manuals for library staff and student assistants
Library and departmental training materials
Library and departmental policies and procedures
Annual goals and objectives for library staff
Formal job descriptions
Reports to senior administrators

APPENDIX 9.3
GUIDE FOR SURVEYING OR INTERVIEWING

Preservation Survey on Staff and User Education PPP Task Force E

The purpose of this survey is twofold:

- To identify current library activities designed to provide preservation education for staff and users
- To solicit general and specific ideas regarding the need for additional training opportunities, and potential approaches

Please review this questionnaire with staff members in your unit, and encourage individual responses where appropriate. Return to ______________ by ______________. Thank you for your assistance.

Please note the following examples of topics that could be addressed through a program of preservation education for the libraries:

- The chemical and physical nature of library materials, and what causes them to deteriorate
- Correct procedures for shelving, photocopying, shipping, and general handling of library materials (including paper, film, photographs, magnetic tape, and other media); using book trucks; cleaning microform readers
- How to recognize brittle paper, bound volumes that are structurally unsound, insects that might damage library materials
- The dangers posed to library materials by eating, drinking, or smoking in libraries; by mending worn and damaged materials without appropriate training; by use of book drops, rubber bands, paper clips
- How library materials should be housed (i.e., appropriate levels for heat, humidity, light, and cleanliness)

Keeping above list in mind, please answer the following questions:

1. What preservation training opportunities are currently provided for staff in your library, department, or unit?

2. What preservation training opportunities are not now provided for staff, but are needed?

3. What preservation training opportunities are currently provided for student assistants in your library, department, or unit?

4. What training opportunities are not now provided for student assistants, but are needed?

5. What preservation training opportunities are currently provided for library users, by your library, department, or unit?

6. What preservation training opportunities are not now provided for library users, but are needed?

7. If a committee to implement the recommendations of Preservation Planning Program Task Force E (Staff and User Education) were to be created by the Director of Libraries, would you be interested in participating? What special interest or expertise would you bring to such a committee?

APPENDIX 9.4
SAMPLE OUTLINE FOR STAFF AND USER EDUCATION TASK FORCE REPORT

Introduction

Scope of the study
Description of methodology
Strengths, limitations, or special features of the approach

Analysis of Current Efforts to Educate Staff and Users

This section might be organized by target group (e.g., library student assistants, faculty), training format (e.g., printed materials, presentations by experts), or topic (e.g., shelving, general handling). Each subsection might include the following information:

- Person(s) responsible for activity.
- Time frame (When did the activity begin? When was the product developed? Will the activity or product continue to be available?)
- Site (In what facility is the activity conducted? Where is the product available?)

Recommendations

List of recommendations organized to correspond with the analysis of current efforts, above
Maintaining an acceptable level of ongoing training

Appendices

Samples of existing preservation training materials used in the library
Survey questionnaire and summary survey results

CHAPTER TEN
FUNDRAISING FOR PRESERVATION

Lorraine Olley
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An issue central to long-range preservation planning is the development of a sound funding strategy. Support must be secured both for day-to-day operations and for special projects. The scope and nature of the activities that fall into the "special projects" category will be related directly to the adequacy and stability of internal funding. Where one institution may support routine preservation microfilming of brittle books identified during the course of use, and for which no replacement is available for purchase, others will engage in microfilming only when grant funds can be acquired to do so.

The ***ARL Preservation Statistics*** (Washington, D.C.: Association of Research Libraries, 1993) for FY 1991-92 reveal current funding trends in North American research libraries. Of the more than $76 million spent by all ARL libraries for preservation supplies, equipment, salaries, and contractual services, $8.5 million (approximately 10.5 percent %) came from external sources. This figure suggests that a solid base of support is being provided through regular institutional budgeting, but that external resources are a significant supplement to internal funding.

Building the local resource base takes time and administrative commitment. It is not unusual, at the point where a ***PPP*** study is undertaken, for the commercial binding budget to represent the only library funds earmarked specifically for preservation. To broaden the scope of a preservation effort, internal funding must be redirected and new funds identified. Here, the director, with support from the heads of collection development and preservation, must be prepared to make a compelling case, year after year, to the library's parent organization. Judging from the gradual growth in internal funds expended for preservation in North American research libraries, administrators are meeting with success in their attempts to provide a measure of stability for both newly established preservation programs and for programs in later stages of development. Not surprisingly, the more well established a preservation program and the better funded internally, the more likely it is to seek and secure regular funding from outside sources to support preservation activities that could not otherwise be undertaken.

Although library development is a fairly recent initiative, a study of fund raising for higher education yields useful information. Sources of voluntary support for higher education may be grouped in four categories: individuals, who contribute about 50% of total charitable funds; foundations, which contribute about 20%; corporations, which contribute about 23%; and other sources, which account for about 7%. For academic libraries specifically, the breakdown is 50% from individuals, 40% from foundations, and 10% from corporations. These figures suggest that for general development efforts, libraries should consider targeting individual donors. For specific projects, however, other sources, including foundation and government grant funding, may be more appropriate.

Fund raising for preservation, to be successful, must proceed in cooperation with the development program of the library and its parent organization. All library development efforts require the active involvement of the library director, whose status conveys the importance of fund raising goals to potential individual and group donors. If the library has its own development officer, that person does not substitute for the director, but plans and prepares for the director's fund raising activities. Cooperation with central development staff benefits the library by providing access to expertise; as well as to alumni, corporations, and foundations.

A preservation program will gain most from a fund raising effort that supports its progressive development. The availability of external funds should not set a course for the program that diverts attention from higher priority needs. Serious consideration should be given to basing initial fund raising efforts on *PPP* study findings. Identification of the specific program elements for which external funds may be sought could occur simultaneously with the overall design of an implementation strategy.

Preservation grant projects typically require cooperation among library units. Bibliographic control staff will be involved in the design and implementation of preservation projects where access to collections will either be improved or provided for the first time; and where materials will be reformatted to create either a substitute or backup copy for originals. The library administrator responsible for facilities, as well the facilities group within the parent organization, will take the lead in projects involving building construction or renovation. Proposals with a strong educational component may involve a library staff development officer, or bibliographic instruction librarians.

In almost all cases, collection development librarians will be key contributors to the funding effort. Among the critical aspects of their involvement is identification of collections deserving of systematic preservation. It may be worthwhile to consider a structured selection process. Here, preservation and collection development are partners in developing selection criteria, soliciting suggestions from the collection development staff, and identifying funding priorities. Formalizing the selection process provides visibility for the preservation program and its critical links to collection development and library service, and can help to shape a long-term strategy for establishing preservation priorities and acting on them. Collections put forward by bibliographers and curators and not selected for inclusion in a first grant proposal can be reviewed again in the next funding round. In regularly soliciting formal input from subject specialists, attention is focused on the condition and value of the collections, and on the library's commitment to preserve its holdings.

An important task to be undertaken by a study team member, the library development officer, and/or a central development office, is the gathering of as much information as possible about potential sources for preservation funding. The grants programs of various federal agencies and private foundations must be identified, and current application guidelines and annual reports from recent years collected and reviewed. Printed reference sources such as ***The National Guide to Funding for Libraries and Information Services*** edited by Stan Olson, Ruth Kovacs, and Suzanne Haile (N.Y.: The Foundation Center, 1991) and automated search capabilities greatly facilitate the identification of potential donors. Here, a central development office can be invaluable. Once a universe of possibilities has been established, creative thinking is required to match various program elements to plausible funding sources. Brainstorming may be a useful technique for stimulating ideas, particularly if a development officer from the parent organization can be involved.

A critical element in a development plan is the case statement. It serves as the foundation for all other documents (such as brochures and proposals) to be used in general fund raising, and assists the library's or institution's development office in communicating with potential donors about the preservation program and its needs. The case statement should emphasize the importance and uniqueness of the library's collections and services; and the immediacy, scope, and potential impact of its preservation problems. In a general fund raising effort, the case statement lists the program elements identified for funding, and shows how these elements strengthen the overall preservation effort and the library's commitment to its stated mission. Each program element in the statement is described clearly and concisely and is accompanied by a realistic budget. In a more focused fund raising effort, the case statement can be drawn upon to establish for the potential donor or funding agency a context within which the proposed preservation project will be undertaken.

A second document critical for fund raising, particularly where government grants are pursued, is the library's long-range preservation plan. The final report that emerges from the *PPP* study will provide credible evidence that a request for project funds fits into an overall funding scheme, and that the proposed activity is indeed an organizational priority identified by means of a thoughtful, logical process.

Since individuals account for half of all charitable giving to academic libraries, they are an important group to consider in developing an external funding plan. The literature on fund raising points out that the aspiration to be a worthwhile member of a worthwhile group is a primary motivator of individual donors. They are apt to make a decision to contribute to worthy cause on an emotional basis, and to rationalize the decision later. Thus, the cause must be presented as relevant, important, and urgent. Donors are drawn to association with strong leadership, with stable institutions, and with programs that have already had some success, and it is partly the responsibility of the library director to project these qualities in his or her relations with prospective donors.

Fund raising activity aimed at individuals can take three forms: the major campaign (which raises significant funds for a specific project, such as construction of a building), annual giving (through a library friends group, for example), and individual giving (either outright or deferred) for a specific purpose. A campaign is the most intensive activity in terms of both time (3 to 5 years) and the involvement of the development staff and library director. Preservation will probably not, therefore, be the sole focus of a major campaign, but may be included as one component of a larger appeal. The friends group serves several important functions. It introduces people to the idea of providing regular support for libraries; is an ongoing catalyst for annual giving; serves as a means to identify and cultivate potential major donors; and through membership, educates people about libraries and their needs. In addition to the friends, individual giving can be encouraged through academic associations. Reunion classes, for example, may be solicited to target the library for class giving. The library may also promote memorial or commemorative gifts. Money for the purchase of library materials can be raised, for example, in honor of the retirement of a faculty member, in memory of a colleague or friend, or to acknowledge significant academic achievement.

Corporate support for higher education has dwindled over the past few years as a result of mergers and financial constraints. A corporate relations program, however, remains an important part of the library development effort. The best approach to corporation and business giving is through individuals who are highly motivated major donors, and who can use their influence to stimulate corporate interest in to the library and direct funds there. The preservation program may also benefit from the donation of equipment, and from collaborative projects with information industries that are experimenting with cutting-edge technologies. Experimental work with optical scanning has stimulated a number of innovative cooperative undertakings involving universities and industry, and the potential for additional efforts is likely to exist for the foreseeable future.

Government and private foundations have provided substantial funding for preservation activities. Proposals submitted to private foundations may be simpler and less detailed than those required for government grants. Close coordination with the central development office is required when approaching foundations, as the office may already have targeted particular organizations to receive particular proposals. A general sense of possible sources can be gained by scanning recent volumes of the core preservation newsletters (e.g., ***Conservation Administration News*, *The Abbey Newsletter***, the ***Commission on Preservation and Access Newsletter***) for reports of grant awards, but informed, systematic use of major reference tools will yield a broader range of possibilities.

The National Endowment for the Humanities Division of Preservation and Access is a major source of funding for preservation projects. The Endowment supports preservation reformatting, conservation of special collections, preservation education and training, statewide preservation planning, regional preservation services, research and development, stabilization of material culture collections, and bibliographic control. The Department of Education Title II-C supports the acquisition, bibliographic control, and preservation of library materials in the nation's major research libraries. The National Historical Publications and Records Commission, part of the National Archives and Records Administration, provides funds to preserve and make accessible archives materials relating to the history of the United States. State libraries and agencies may also provide funding for preservation activities.

It is essential that the focus and interests of a funding organization be understood before making an application. This is best achieved by reading all of the literature provided on request, and where possible, through an ongoing dialogue with foundation officers. In some cases there will be opportunities to discuss a potential proposal, to prepare a draft for preliminary review, and to submit a final proposal that thoroughly discusses the preservation problem and how it will be addressed through the grant. In others, there will be little or no opportunity to do anything more than review foundation reports and submit a brief grant proposal based on fairly loose guidelines. Some foundations and agencies are interested primarily in supporting new initiatives that have a national impact (e.g., scientific research that will answer questions for the global preservation community; microfilming projects that provide worldwide access to information); others look for projects that have local implications (e.g., enhancement of preservation training opportunities in a particular region, or conservation of a collection that has local significance).

The most complex part of developing a proposal can be budget preparation. A central office within the library's parent organization will be a source of assistance, particularly when it comes to calculating indirect cost rates and the benefits associated with various types of salaries. While it is advantageous to attract as high a percentage as possible of total project costs from outside sources. a strong institutional commitment to preservation, manifested by a significant institutional contribution to project costs, can boost the chances that a proposal will be funded.

Fund raising activities extend beyond the receipt of gifts or the completion of a project. Final reports prepare the ground for the next solicitation or proposal. Fund raisers stress the importance of thanking individuals or groups of donors, and extending recognition in appropriate and visible ways. Foundations and government agencies should receive timely, carefully articulated progress and final reports on funded projects. Announcements of preservation grant awards and gifts, placed in key publications (local newspapers, alumni newsletters, professional journals), highlight the activities of the library's preservation program, express thanks to donors, and may stimulate new interest and giving.

Sources for Additional Information

Dewey, Barbara I., ed. *Raising Money for Academic and Research Libraries: A How-To-Do-It Manual for Librarians.* (How-to-do-it Manuals for Libraries, no. 18). NY: Neal-Schuman, 1991.

This publication is the essential source for information on fund raising for libraries. It includes most relevant topics and gives useful information and references.

Steele, Victoria and Stephen D. Elder. *Becoming a Fundraiser: the Principles and Practice of Library Development.* Chicago: American Library Association, 1992.

This is a valuable primer for library directors and library development officers who are planning to solicit major gifts, despite the fact that the authors do not consider preservation a viable focus for a fund raising effort.

Library Development: A Future Imperative. Dwight F. Burlingame, ed. NY: Haworth Press, 1990. (Also published in *Journal of Library Administration* 12, no. 4[1990]).

This publication contains a collection of papers on various aspects of development for academic and public libraries. Not as comprehensive as Dewey.

CHAPTER ELEVEN
PHASE III: PLANNING FOR PRESERVATION

Transition to Phase III

As the task force investigations draw to a close, responsibility for preparing a final report shifts back to the study team. The report will present a long-range, comprehensive preservation plan for the library. Also included will be data gathered during Phases I and II of the ***Preservation Planning Program*** study that document and justify the recommendations embodied in the plan. In the short run, the success of the study team and task forces will be measured by the accuracy and completeness of assembled data, the range and quality of the ideas presented, the degree of general acceptance accorded the recommendations, and the speed and competence with which the first phases of the plan are implemented. The overall success of the ***PPP*** can only be judged in the long run, by the extent to which the library improves and expands its preservation capabilities.

Although overall responsibility for implementation lies wit the library's administration, the study team is responsible for anticipating major obstacles and presenting a realistic proposal. A combination of momentum and fatigue may tempt the team to paste together the task force reports, write an introduction, and be done with it. Before drawing conclusions and considering recommendations, however, the team needs to assimilate and analyze a great deal of information. This process begins with a joint session of all task forces and the study team, at which major findings are discussed.

Concluding Phase II

The joint session, which will coincide, if possible, with the third visit by the consultant, has several objectives:

- to provide task force members with an opportunity to summarize the results of their investigations and highlight key issues--thus creating a context within which study team members will analyze task force documents,
- to provide task force members with an opportunity to learn first hand about the activities of the other groups,
- to provide the study team with an opportunity to question task force members about specific preservation problems and opportunities discovered in Phase II, and
- to facilitate the identification of relationships among the findings of the task forces.

During the meeting each task force reports to the whole group, reviewing its charge, its mode of operation, major findings (positive and negative), difficulties encountered, and areas needing further study. During general discussion following the presentations, these questions are considered:

- What patterns seem to emerge from the juxtaposition and overlap of task force findings? What major categories of need have emerged? What seem to be the most promising responses to each? Are there any important gaps or contradictions?
- Do the findings seem to support the assumptions and priorities established at the beginning of the study? Are there any big surprises?
- What major issues will the study team have to deal with in synthesizing task force reports and preparing a complete plan for preservation?
- Are there significant preservation problems that have not been addressed by the task forces in Phase II? How might they be investigated in the future?
- What comments, questions, or suggestions do task force members have for the study team as it enters the last stage of the planning process?

Task force members may be asked for comments for additional information later in Phase III, but their major responsibilities end with the presentation of reports to the study team.

Preparing for Phase III

The study team, generally with the assistance of the consultant, next plans its work for the remainder of the study, adapting the sequence of tasks suggested at the end of ***Appendix 1.1*** as appropriate. As each team member reads through the task force reports, attention should be focused on ways of integrating major themes and issues.

Analyzing and Synthesizing Phase II Data

The study team analysis of task force findings will generally take three to four weeks, and should include the activities described below. Depending upon the nature of the materials to be reviewed, some tasks will be carried out by individuals and others by the whole team.

1. Review the major issues, problems, and needs identified during the joint session of the study team and task forces. Are they adequately documented? What priorities ought to shape the final plan?
2. Determine how individual task force recommendations relate to these priorities. Can they be clustered around major themes?
3. Use the impact/feasibility grid techniques (see ***Appendix 3.5***) to rank the proposed solutions within each cluster.
4. Identify recommendations with a sequential or dependent relationship, and estimate the length of time needed to carry out each. Which tasks must be accomplished before others can begin? How might proposed activities be

scheduled over a period of several years? Identify short-, medium-, and long-term activities (those that can take place within a year, three years, and five years or more).

Patterns for program organization and priorities for development should now be emerging, and with them the shape of the plan that the study team will present. Administrative issues such as the assignment of authority and responsibility for policy making and daily management, mechanisms for coordination among units, and the timing and personnel implications of potential reorganization, deserve careful consideration. The following questions will be useful in analyzing each recommendation:

- What resource, human and material, are needed to implement the recommendation? Are they available?
- How widely will implementation affect staff and operations? One unit only? Many units? All units and staff?
- What are the financial implications of such major commitments as capital outlays, ongoing staff costs, and expenditures for materials and services?
- What types of decisions are required? Major policy decisions? Minor procedural decisions? Who can make them?
- What are the probable consequences of not implementing a recommendation? Can this be documented?

The team should reach a preliminary agreement on the elements to be included in a comprehensive plan, and a workable sequence for their introduction. Before proceeding further, the library director should be involved in a review of progress and discussion of the probable outcome of the study.

Director's Review

The director can offer valuable assistance in assessing the feasibility of various elements in the plan, and advise the team on factors to be considered in developing an implementation strategy. The study team chair, or the whole team, should meet with the director to outline the major findings of the study, describe the elements to be included in the plan, and discuss the proposed schedule for introducing or expanding activities. The director's views on the following should be sought:

- What are the most important and/or most appealing elements in the plan?
- Which appear to be the easiest to accomplish? The most difficult?
- How do priorities identified in the study fit with other organizational priorities?
- How does the need for human and material resources, implicit in the proposed elements of a comprehensive preservation plan, compete and mesh with other demands on the library?

- Have there been occurrences since the study began that might affect the library's ability to move ahead in developing a comprehensive preservation program?
- Are there events in the foreseeable future (major changes in other library programs, introduction of new services, curtailment of existing programs, anticipated staff changes, financial pressures of opportunities) which should influence the sequence of implementation activities, or the rate at which they might take place?
- Are there elements missing which the study team ought to include?
- Are there aspects of the team's preliminary recommendations that the director finds unacceptable, or judges to be impossible?

In light of the information and insights gained from the director's review, the team may adjust emphases, alter priorities, or revise the tentative time table.

Implementation Strategy

The implementation strategy is an action plan for transforming recommendations into reality. It should spell out:

- what needs to be done (the decisions and activities necessary to implement major recommendations);
- who is to do what;
- Who has authority for ensuring that tasks are accomplished and progress made;
- the tools, materials, equipment, and other resources required;
- a timetable detailing when each task is to begin, (the sequence of activities, and completion of deadlines); and
- how monitoring and evaluation will be carried out.

Sections of the implementation strategy are drafted by individual team members following a pattern agreed upon in advance by the whole team. Two cautions should be observed:

> ***Set realistic limits on the amount of detail***
> The plan will cover many different kinds of activities to be implemented over several years. It is not sensible to attempt to describe every one of them in the same thorough fashion. The team should focus on the first steps involved in implementing major recommendations. This blueprint for the early stages of program development will initiate the process; detailed planning for subsequent stages of development need only be acknowledged and responsibility assigned. Much of the information that will be required later resides in the task force reports, which will be revisited over time.

> ***Set realistic limits on the responsibilities assigned to any single individual***
> The risk of failure increases directly with the degree to which a major program is *dependent upon a single position. Limitations of time, the pressure of other* responsibilities, and the potential for disruption when a vacancy occurs, all work against success--no matter how great the abilities of the person.

This latter caution will be especially important if, as will often be the case, the team's recommendations include the creation of a preservation management position. Vital as a preservation manager may be for the effective administration of activities, the delays and difficulties inherent in funding and filling such a position make it essential that implementation of the first phases of the preservation plan not hinge on a new appointment. Furthermore, it is tempting to assign all tasks to a position that does not exist, thus avoiding the need for changes in existing arrangements.

In addition to this practical consideration, there is an important principle at stake: Preservation is a system-wide concern, and activities that affect the survival of the collections take place throughout the library. One measure of the success of the ***PPP*** will be the extent to which this shared responsibility is recognized and accepted by all staff. For libraries that have a preservation management position in place and are undertaking the ***PPP*** to help shape a long-term program agenda, it may be productive (or even necessary) to use study results to reshape the role and responsibilities of the manager. Nonetheless, the responsibilities of other staff should not be overlooked or left undocumented.

Appointment of a preservation committee, with or without a recommendation for hiring a preservation manager, is often an effective method for encouraging system-wide involvement in the implementation of ***PPP*** results. Here too, however, the study team needs to exercise restraint in the assignment of responsibilities. by reflecting on the amount of time involved in conducting the ***PPP*** study, the team will be able to make realistic estimates of the potential and limitations of a standing committee.

A useful approach to ensuring effective distribution of responsibilities is to ask about each proposed activity:

- What member of the staff, if provided with a charge, administrative encouragement, and the information resources accumulated during the study, would be able to integrate this task into her/her present duties?

In addition to spelling out the initial response to ***PPP*** recommendations, the implementation strategy should include a process for ongoing monitoring of progress and a systematic, periodic evaluation of goals and accomplishments. There are several approaches that might be used, singly or in combination:

- Assign a senior administrator responsible for monitoring progress. Provide him or her with a calendar of target dates on which implementation reports for various activities are due. Should a delay in one area affect the starting date of a later activity, the administrator coordinates adjustments in plans and time tables.

- Appoint a preservation committee to perform the monitoring and coordinating role, with authority from the library director to resolve any inter-departmental difficulties that might arise during the course of implementation. This committee might include some or all of the study team members, and/or staff members from the units that will be most directly involved in implementation.

- Establish a date within twelve to eighteen months for a systematic review of study team recommendations, where progress will be evaluated and necessary revisions made based on experience and intervening events. This review should result in a report to the director describing progress, identifying problems that may have developed, and proposing solutions. At that time, a second systematic review should also be scheduled to ensure that activities continue as planned.

All those involved in monitoring and reviewing the implementation process must keep in mind that periodic revision of target dates and strategies will almost certainly be required to accommodate unanticipated conditions within the library, to respond to expansion or contraction of available resources, and to take advantage of technical developments. The goal of the *PPP* is not to impose rigid constraints on future activities, but rather, to create organizational mechanisms and an informed staff capable of recognizing and responding to changing preservation needs and opportunities.

Ongoing accountability, built into job descriptions and staff goals and objectives, is the key to successful preservation program development. Regardless of how the program is structured, preservation-related tasks will inevitably be distributed throughout the library. these should be viewed as regular duties, not as extracurricular activities, and be supervised and evaluated in ways that encourage good performance.

Preparing the Final Report

Analysis of Phase II findings has focused on identifying those elements that should be included in a comprehensive plan for preservation program development. Now attention must be directed to pulling the findings and recommendations together into a report that is realistic, understandable, challenging, and persuasive. The final report constitutes both a culmination and commencement. It completes the data gathering and analysis and provides the foundation and impetus for action.

Content and Format

The report is the responsibility of the entire team. The group develops an outline based on the broad issues or themes that its recommendations seek to address. This approach will facilitate logical organization and presentation of what might otherwise be an overwhelming list of unrelated recommendations. The following components are included in the report:

Introduction
Describes how the study was carried out, the roles of various individuals and groups, the purpose and goals of the undertaking.

Overview of major findings and recommendations
An executive summary of the preservation needs identified through the study, and an outline of a comprehensive plan for them. Likely to receive the widest reading, this section is an abstract to the full report.

Description of the present situation
A more fully developed statement of the preservation needs of the collections, organized to correspond with the recommendations that follow.

Recommendations and implementation strategy
Presentation of the study team's synthesis of task force recommendations, and a detailed plan for the development of a comprehensive preservation program.

Appendices
Organization charts, implementation time tables, statistical summaries of environmental and condition survey date, lists of resources, task force documents, and other materials that support or justify the final recommendations.

In the course of the study the team and task forces will have accumulated and created many documents. No attempt should be made to convey, in the final report, all the information contained in those documents. The report should summarize, and refer readers to supporting materials for more detailed information. The team should establish guidelines for what is to be included in the text before assigning individuals or sub-=groups to draft sections. Agreement on the desirable length of each section will aid in achieving balance and an appropriate level of detail.

All team members should review each draft and arrive at a consensus on changes in substance, should any be suggested. Final editing to ensure stylistic consistency is best assigned to a single individual. Choose the best writer in the group. the report must be approachable, readable, evenly paced, and grammatically correct, if it is to be well received. As drafts are being reviewed, team members should keep in mind the following factors:

- The report should contain adequate support for all conclusions and recommendations. There is sometimes a tendency at this stage to deal with issues as though they are self-evident. the report needs to provide sufficient background and rationale to make it understandable and persuasive to those who have not shared the study team's experience.
- Recommendations should avoid the appearance of criticizing past performance or policies of the library, by emphasizing future possibilities and opportunities. In referring to economic realities and other constraints that have been operative, recommendations can be presented in a positive and constructive light.

Final Review

Feedback should be solicited on a near-final draft before widespread distribution. Several groups and individuals can provide a helpful last check to ensure that issues are adequately covered and clearly presented:

- The library director, other senior administrators, and managers can respond to the draft from a managerial perspective, offering insights or raising questions related to the organizational, service, and operational implications of the report.

- Task force members can comment on the internal balance and accuracy with which the study team has interpreted findings.
- The consultant can comment on the technical accuracy and feasibility of recommendations.
- A person completely outside thee institution (a willing friend, for example) can furnish an objective appraisal of content and clarity.

Throughout the planning process, communication with all parties will have been good enough that responses should result in fine tuning rather than a major overhaul. In some cases it may be appropriate for the team to meet with a reviewer to discuss a response. After this final review the team agrees on necessary changes, and the report is completed and duplicated.

Disseminating the Results

The study team, in consultation with the director, decides on the extent and means of disseminating the report. The results should be made known to officers of the parent organization; and to major patron groups, friends organizations, and neighboring libraries. Copies of the summary section might be distributed to such groups, with the full report made available on request.

A formal presentation to staff can serve as a powerful first step in implementation, generating interest in and support for subsequent program development. Though completion of the report concludes the study team's responsibilities, the manner of its presentation should suggest the inauguration of a new initiative, not the conclusion of library attention to the topic. A general staff meeting during which the director formally accepts the report, discharges members of the study team and task forces with thanks, and hands the report on to those responsible for implementation, would be a fitting commencement.